Acceleration Space with Applications to Cosmography, the Possibility of New Phenomena in Certain Opposed Force Exotic Matter Arrangements, Free Acceleration, Gravity Cameras, and Radio Cameras

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Abstract

Introduction

Methods

[1]restatedVV
Consider the diagram [mushroom] where 1/t^2 denotes a curvature, where convex should indicate repulsion...
[/1]

With respect to the concept of gravitational curvature outlined in [1], can we not say that an “acceleration field” is more fundamental than a force field? All objects in a room cancel out by mass to give the same acceleration down. And all objects at radius r around a body are accelerated at the same rate. Isn't it more spatially related rather than a property of masses and forces? What matters for acceleration is only the object toward which acceleration is being calculated, that is, its distance and mass.

Although gravitational acceleration is not proper, Einsteinian, or relativistic acceleration, because a bead attached to a gravitationally accelerated body would not swing back, analogous to an accelerometer, we instead should think of it rather as a false *force*, as some part of the object should swing back, as if hit by something, and the accelerometer as a “forcemeter”.

What we now call force meters are springs that measure forces pulling down by weight in units of Newton's. What they actually measure is the force on the attached *object* pulling down, or actually the pull on the meter up with the addition of the weight (that is, the repulsion of the ground or holder upward against the natural curvature toward falling). And the “forcemeter” that we know as an accelerometer measures force on itself by the same principle, but with a lighter, more “bead string-like” “spring” that also has direction. And in the case of a smartphone with an accelerometer lying on the floor, what is measured is the force of repulsion of the ground pushing up against the natural curve of gravity. This should then be amended and accelerometers renamed forcemeters, and the measurement expressed in a force vector. Perhaps if the mass is not known it can simply be expressed as "X * 9.8 m/s^2". Accelerometers operate on the same “spring” principle with a known resistance, so it is calculating force on the string-like part inside, so force should be obtainable, rather than change in velocity.

In the same way, a weight scale measures the force repulsing it and a person on it, from the ground. The accelerometer does not measure acceleration in gravity fall, so goes the point of making the distinction. A “true accelerometer” would measure it, although it would be acceleration without “force”.

There are then three possible concepts of curvature: the stress-energy tensor, the large-scale structure of the universe, and the kind described here. And it is proposed here that it has a physical meaning. The three concepts can be combined into one if we think of the curvature as extra or less space. As for example happens on the Earth's surface as two parallel directions converge forward because there is a convex curvature. In the same way that light is deflected around a gravity source, it is also refracted in a changing medium, so curvature can be thought of as density. We can think of the light's incident angle with respect to the acceleration angle as incident angle relative to a changing medium and acceleration magnitude as density. Einstein also believed that light shot from a gravitational body should start off with a speed less than c. Rather the speed of light should decrease headed toward a gravity body as we get closer to it.

As in Einstein's proposal of 1911 of the variation of the speed of light: "From the just proved assertion, that the speed of light in a gravity field is a function of position, it is easily deduced from Huygens's principle that light rays propagating at right angles to the gravity field must experience curvature." And in a subsequent 1912 paper: “The principle of the constancy of the speed of light can be kept only when one restricts oneself to space-time regions of constant gravitational potential.”

Which makes sense if it is traveling through a denser medium or more space.

Einstein derived the general relativity equations that explained the precession of Mercury, which may serve as a curvature constant in tuning the parameters. In the same way that the curvature of the Earth was measured, in radians per meter, the curvature of the universe may be measured, and if the universe is convex as the Earth, then there should be a falling over the horizon in some sense. This may explain galaxies accelerating in the concept of “free acceleration”. Imagine if you are falling in orbit with the same speed as a box. If you then increase your speed a little bit, you would experience an ever increasing acceleration in relation to the box in relation to your velocity. This is akin to moving to the Earth at a slightly greater speed, leading to a faster increase in acceleration if we are ahead.

Even reactive or repulsive proper acceleration is atom repulsion and attraction. So how is time dilation happening from the proper-not proper distinction.

If time happens slower under a greater repulsed ground gravity field, it might be understand in terms of a kind of acceleration heating of atoms. If atoms have certain atomic speeds or trajectories they maintain, after all if they travel at trillions of orbits per second or greater the effects of acceleration in a black hole or planet might result in slight differences in atomic scale reactions or retarded orbits. There are different understandings of what is heat, if something is compressed to a solid and tested by a thermometer. Perhaps time dilation on the macroscopic experiential reaction scale is akin to this speeding up. If gravitational direction compression acts as a force on atoms and orbitals and in some way changes the orbit or some less understood property on this scale it can be absolutely determined that there is a time dilation effect. In empty space away from gravity the object would age faster (if still) which can be understood as atoms orbiting faster, to get places faster in less time.

Maybe they are *both* proper acceleration. If we could measure the number of orbits an electron is making around a nucleus trillions of times per second with a slight sideways increasing repulsion or movement of the nucleus maybe we can obtain a quantity approximation for the orbital speed, if we measure radians around a nucleus per time.

If we take the space-time interval:

$$0 > x^2 - (ct)^2 \qquad (ct)^2 > x^2 \qquad ct > x \qquad c > \frac{x}{t}$$

Which gives the observed speed of a particle with respect to another's rest frame, might the time dilation be used to scale the particles actual speed, to give a different rate of time? This would mean there is a difference between particles traveling slower or just faster true speed but with time dilation, for example in the effect of the forces of acceleration and gravitation and electromagnetism. The measured speed might remain the same but the effect of acceleration forces would be different.

Time is not perpendicular to space but rather the hypotenuse in the time it would take to traverse it at the speed of light:

$$x^2 + y^2 = (ct)^2$$

That means that as the displacement approaches the maximum speed of light, the hypotenuse gets closer to the adjacent. Rather the hypotenuse is always greater than the displacement for ordinary matter.

$$x^2 + y^2 < (ct)^2$$

Which means the triangle hypotenuse goes up "out of the paper" in a new complex number or dimension. This is actually given by the space-time interval.

$$x^2 + y^2 + s^2 = (ct)^2$$

No matter what we do we cannot get a negative time or the radius of a sphere. For this we have to imagine the time length as an axis rather than measure between coordinates.

$$\sqrt{x^2 + y^2 + s^2} = ct$$

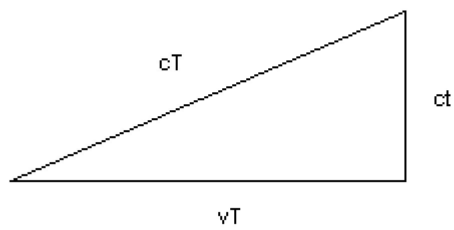
We have to go into imaginary space or imaginary offset to get a negative square. To do this, we would need imaginary acceleration. As will be shown, the time to accelerate is a gradient to measure between points of space or time in the resulting fields (the time to accelerate to X meters) and it will take further work to elucidate the arrangement of imaginary acceleration. Reverse acceleration mapping would be needed to get the arrangement to get the desired shape. An imaginary time might be achieved by being close enough within a sufficiently massive point-like mass, as in the gravitational time dilation equation. The exact Schwarzschild solution can be derived thusly by plugging the escape velocity equation into the time dilation equation:

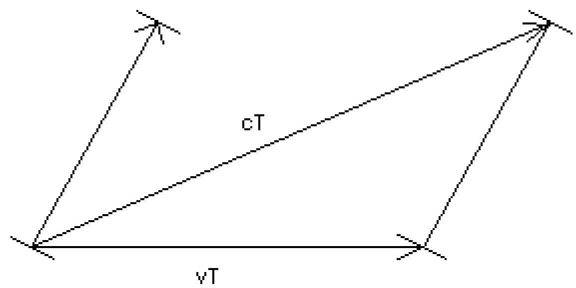
$$v^2 = \frac{2 \cdot G \cdot M}{r} \qquad \gamma = \sqrt{1 - \frac{v^2}{c^2}} = \sqrt{1 - \frac{2 \cdot G \cdot M}{r \cdot c^2}}$$

Thus the effect of faster speed (younger) is in the same direction as smaller radius from a gravitational body.

The time dilation depends on the observed velocity, rather than acceleration, and two objects heading in different directions would symmetrically measure the other to be time-dilated, unless the other reversed velocity by accelerating and met up with the other, which would make the reversing-accelerating side “younger”. The velocity of the object would be added to the velocity of the particles. This can be explained by the simple principle: “the faster you go, the less time it takes to get there.”

What would be needed for a decomposition of time dilation into vector components is to realize that the relativistic triangle needs to be extended to cases beyond right triangles:





The equivalent relation should then be: $-\cos(\angle(cT, vT))\cdot 2\cdot cT\cdot vT+(cT)^2+(vT)^2=(ct)^2$

The net orbital time dilation can be obtained by multiplying the gravitational and velocity contribution given the required orbital speed for a planet mass M at radius r. The time dilation factor would have three components, depending on the direction of light, and would be enough to explain paper [3] and make meaningful the possibility of reversing the role of time with space in a black hole.

The principle can be explained simply thusly: if you are located a distance r from a mass M, you must experience acceleration A, and if your time goes slower your acceleration and therefore force must scale accordingly, or else you would record a different gravitational constant. This would not make sense from the stationary mass's point of view, but it makes sense if we think of the scaled acceleration and forces as being those on the time-dilated side, as there is acceleration of you toward the mass, and the mass toward you, and together you have a combined acceleration. This might approach Newtonian laws at local conditions, but if we combine the gravitational time dilation component with the unaltered acceleration, we get:

$$A_{relativistic}=\left(\frac{2\cdot G\cdot M}{r^2}\right)\cdot\sqrt{1-\frac{2\cdot G\cdot M}{r\cdot c^2}}$$

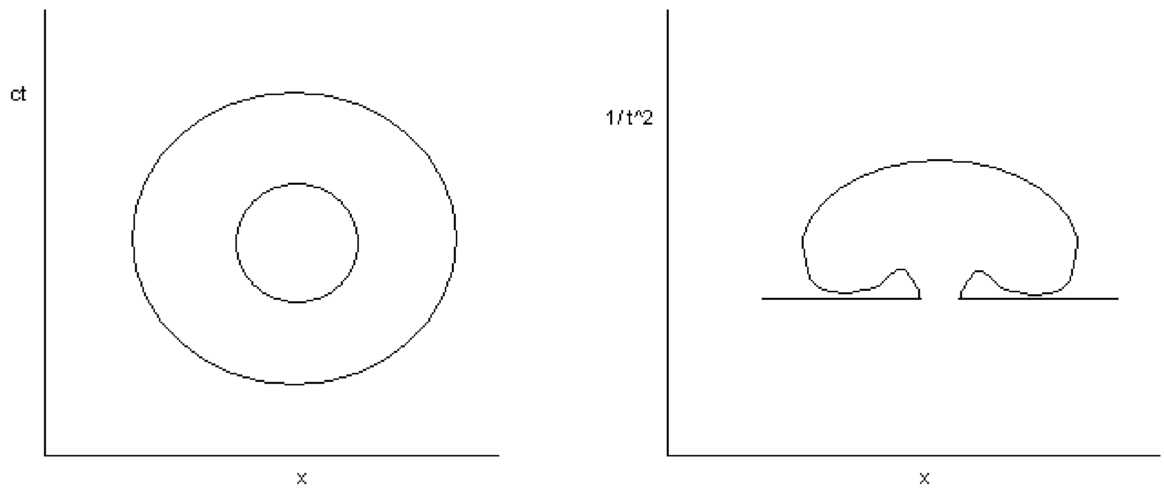
Which looks reasonably well when graphed, and may be tested. Likewise, "... individual electrons describe corresponding parts of their orbits in times shorter for the [rest] system in the ratio : $\sqrt{}(1 - v^2/c^2)$" (Larmor 1897).

Given the 1-spatial dimension acceleration curve given in [1]^^restated, we can count and integrate the curve angle from a starting point going from left to right to give a relative acceleration value and direction at any point.

If we interpret the $\frac{1}{t^2}$ axis in [1] to be a rearrangement of the acceleration X in the form $\frac{1\,m}{Y\,lm^2}$

The geometric interpretation of the Y factor would be that there are two time dimensions. If expressed in light-seconds in the conversion $Y \cdot c^2$, the Y factor can be interpreted as a surface area.

As stated in [1], we can think of the curvature being given by not a "height" dimension but areas of "surface elements" at measuring points, where convex points indicate positive, repulsive curvature, and negative, concave points indicate attractive gravity wells.



Angle is in actuality the length of arcs around circles of unit radius, and thus a relation between two lengths, in an abstract sense, and exemplified by a right triangle in the most basic case, possible to be obtained in one of three possible ways depending on the trigonometric function. An angle is a physical relation between two vectors but the very quantity of an angle that grows is the arc length given by two side lengths, which give a single quantity if divided and are, but really is a unitless ratio, given by any two lengths with units. The angle then is a function of a ratio of two lengths that gives a new length. Really, radians should be a length measurement (arc length). In the same way, we can think of the "arc area" as giving an angle in 3 dimensions.

The surfaces given by the conversion can be thought of as a 3-dimensional cross section with the starting sample points in the walk space as angle and position parameters. The spacing between surfaces or sheets should be the same as in the walk space and depend on the base unit length used in the acceleration measurement, and can be thought of as the 3rd component in the volume.

What we want then is a conversion with the property that would give a flat angle when given an acceleration of zero, as in [1].

What then is a 360 degree turn in this curvature? First, if acceleration is greater, then the time to accelerate a fixed distance is less, giving a smaller Y factor. If acceleration is greater, the time to reach any speed will be less, and the interval of time of a constant change in position will be less (i.e., a higher speed). A 360 degree turn would have to depend on several factors.

The properties that would give the out-bent mushroom arrangement described in [1] would have to be further elucidated with a mathematical and graphical examination of the properties and resulting fields given by the arrangement described in [1].

If we have two extra time/length dimensions, can we use them as coordinates? In a sense, the corresponding point in the resulting space can be thought of as a "height" on a hill or potential to accelerate.

The resulting fields should be an approximation that grows more refined as the base length decreases, but remain invariant in shape.

A Y factor that grows at a square rate because of acceleration that is falling at a square rate with respect to radius would give perfectly spaced equidistant rings that grow to infinite size as radius approaches grows to infinity. Rather, around a single spherical mass, the resulting fields would give flat sheets.

There is a problem however: at points of zero acceleration as between two spherical masses, the Y factor should grow to infinity. What is needed then is a way to map the domain zero to infinity of the Y factor to a finite range of zero to some maximum constant, as perhaps a Planck acceleration or possibly the minimum black hole mass gravity acceleration at radius=1 (in meters/light-meters^2 or any other appropriate invariant units), using a conversion similar to the relativistic velocity addition equation.

$$Y_{relativistic}=\frac{Y_{initial}2}{(1+\frac{Y_{initial}^2}{Y_{max}^2})}$$

The maximum acceleration constant of 2.5 solar masses would then be given so:

$$M_{min}=4.975\times10^{30}\,kg$$

$$F=\frac{G\,M\,m}{r^2}=\frac{((6.674\times10^{-11}\frac{m^3}{s^2\,kg})\cdot(4.975\times10^{30}\,kg)\cdot(1\,kg))}{(1^2\,ls^2)}$$

$$A_{max}=\frac{F}{m}=\frac{(3.3203\times10^{20}\frac{kg\,m^3}{s^2\,ls^2})}{1\,kg}=3.3203\times10^{20}\frac{m^3}{s^2\,ls^2}$$

$$1\,ls=(299{,}792{,}458\frac{m}{s})\cdot(1\,s)=299{,}792{,}458\,m$$

$$A_{max} = (3.3202\times10^{20}\frac{m^3}{s^2\,ls^2})\cdot(\frac{1}{299{,}792{,}458}\frac{ls^2}{m^2}) = 3{,}694\frac{m}{s^2}$$

$$\frac{s}{lm} = \frac{1\,s}{(\frac{1\,m}{(299{,}792{,}458\frac{m}{s})})} = 299{,}792{,}458$$

$$(3694\frac{m}{s^2})\cdot(299{,}792{,}458^2\frac{s^2}{lm^2}) = 3.3202\times10^{20}\frac{m}{lm^2}$$

However, we must express the maximum constant acceleration as a Y factor, which gives a smaller value with a greater maximum acceleration constant. What is needed then is a *minimum* acceleration, which may for example be added to the measured acceleration before obtaining the Y factor. What this would give then with a single spherical mass then is larger and large flat sheets upwards with decreasing acceleration, but at a decreasing rate that approached a finite size.

##########
[edit this:] a point behind two spherical masses of zero acceleration would create a plane that goes to infinity that is perpendicular to the line between the two masses. As we get samples closer and closer to the point of zero acceleration, the vectors of net acceleration will go closer to pointing toward the closest mass on approach from either of the points, and if on approach from closer to the sides, it would approach a direction closer to the inward of the line connecting the two masses.

[edit this:] Aa42nd.png. How two mass bodies would look like with their angle at 45 bottom left to top right. And the walk sheets starting from bottom or angle. And resulting sheets aa43.png unscaled with curving sideways along sheet #############

It is interesting then to consider what a box submerged in a spherical mass of proportional size would look like when mapped into the acceleration space.

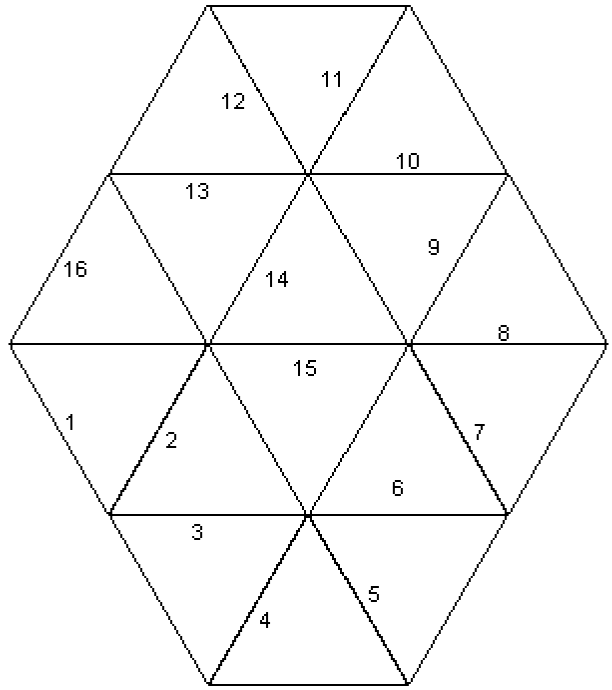
In the repulsed dark matter container as in [1] then, two opposing acceleration fronts would give a sheet that is perpendicular to the acceleration vector to fold back on itself as it passed across the front.

Another possible problem area around points of zero acceleration is there is no vector direction, making determining a reflection or perpendicular angle vector impossible. The solution is to continue as close as possible after the zero point along the previous vector, and this is the what the limit approaches to as we approach the zero point from a certain angle and decrease the vector length.

The exact geometric method to create a representation of the fields can be expressed mathematically by using triangles.

What is needed, is for a triangle grid sheet starting from evenly spacing points to expand or “walk” the acceleration field at vectors perpendicular to the acceleration vectors. What this is then is a function of the acceleration vector angles that samples acceleration magnitudes, which produces new angles. The triangles in the resulting fields then must be fit to expand and contract and warp based on the area magnitudes given. There is always one triangle side free to fit all the areas, as can be proven in the following diagram:

We walk the acceleration field by shooting vectors at 60 degrees perpendicular to the acceleration vector at those points a unit of base length to give 6 new 60-60-60 degree triangles. Around a spherical mass, a sheet over top would curve around and closer together further along, until the paths go in opposite directions and unravel. Although the launch vectors have base length, the other connecting lengths of the triangles in the walk space will not be base length. This does not matter, as it is a logical part of the walk, and all that matters is that the shape remains invariant. More sampling points with uniform magnitude in the walk space in one area would give a greater area for the corresponding surface elements in the resulting fields, and may make parts arbitrarily large. What is needed is for the area of the resulting sample triangles to be measured and used to scale the acceleration space triangles.



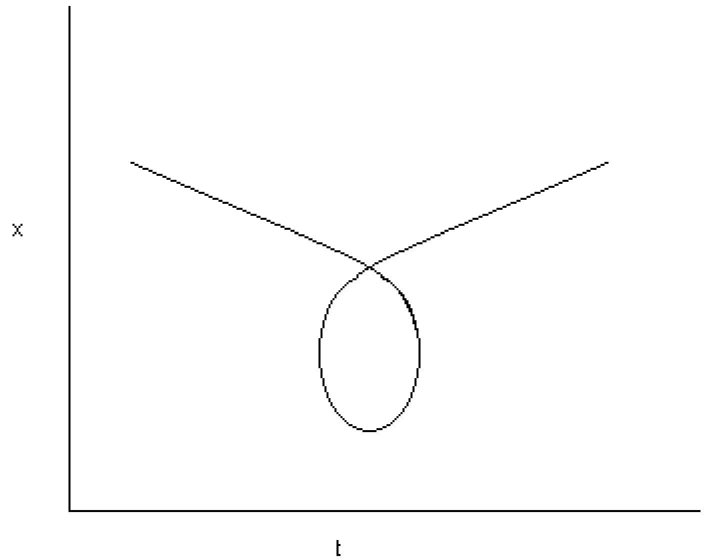
A flat acceleration upward would give a flat sheet perpendicular to the acceleration in the walk space and in the resulting fields would give flat sheets also, with equal acceleration magnitude and thus area at each point, with no curvature. The curvature would be given by connecting neighbor surface elements between sheets, as the sheets would grow larger upwards with decreasing acceleration magnitude, and the lines connecting neighbors would bend outward.

We must also know where to allocate the extra space as we add surface area to the resulting sheets. With respect to the acceleration vector in the walk space and the relative angle along the perpendicular curve, we should curve the resulting field sheet down with a concave angle around a spherical mass, with respect to “our” up of the starting sample point in the walk space.

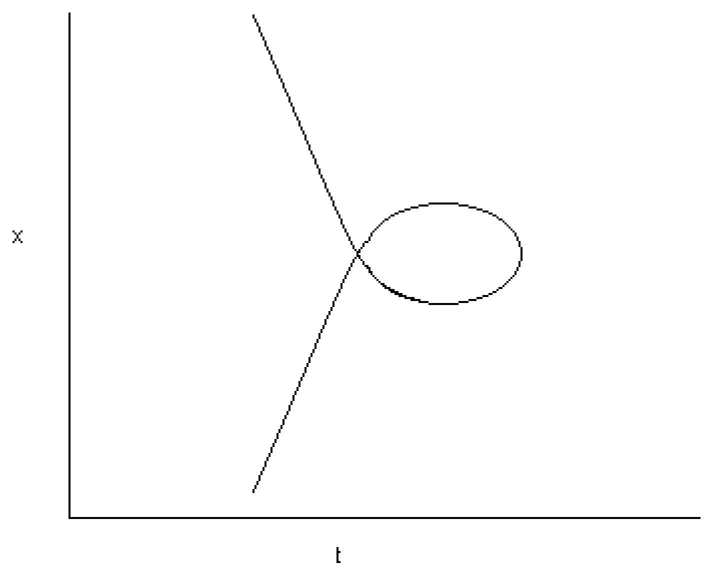
Thus, the acceleration magnitude is now (inverse) area. And the vector is now still a vector in the walk space, but the (inverse) area now gives a curvature angle. The lengths have effectively been switched with the angles.

A sphere mass with sample start points going through and both sides gives sheets that increase in size in both directions from a fixed size in the middle, to a fixed larger sides infinitely far at the sides at a decreasing rate. From the side it gives exactly a pinched downward curve toward the center that levels out on the sides at a level higher on the side, like would be given in the mushroom or one-spatial dimension diagram in [1].

Actually it would not be pinched but level out a bit because inside a spherical mass there is more sideways pulling. And in a point sized black hole there would be a pinched center. And perhaps the loop shape described [2].



The measuring units are then exactly x position offsets of sample points and the vertical is the time dimension, 1-dimensional cross section of the area t^2, equal to $\sqrt{(t^2)} = t$. Rather, it is flipped, with x sideways and t upward.



With the flipped graph, there are two intersections but as we go along t toward the loop along the spacetime trajectory, time then goes backward toward a fixed point back. However, if we undo the scaling or minimum acceleration constant addition, the $\sqrt{Y}$ or t value actually goes to infinity.

[1] *Dark Matter Halo "Swiss Cheese", "White Tears", Dark Matter Properties and Space-Time Bubbles*. Denis Ivanov. The General Science Journal. Mar 24, 2017. <http://gsjournal.net/Science-Journals/Essays/View/6853>

[2] *Warp Navigation*. Denis Ivanov. The General Science Journal. November 8, 2015. <http://gsjournal.net/Science-Journals/Essays/View/6246>

[3] *Symmetric Contradiction in Relativity Theory, the Importance of Velocity Direction, and Feeling the Earth's Acceleration*. Denis Ivanov. The General Science Journal. February 27 2017. <http://gsjournal.net/Science-Journals/Essays/View/6814>

[end here for paper 1, and have experiment simulation of acceleration space, then do other papers for other parts after this, with their experiment simulations etc]

Background?

[put other 3 papers here?]

apr 9

sudden deceleration electron photon spill

aa91.png a triangle with hypotenuse "c T", opposite on the right with "c t", and below "v T"

aa92.png two electrons (e) and a proton below (P) slightly off by right the electrons have inward velocity arrows with labels "v" and "v3" underneath and the (P) has a slightly up but more left arrow "v2" above the two electrons are two right-triangles with adjacent upward, opposites out, and a right triangle bigger the adjacents have arrows inward (velocities) from each electron are rays going up and inward along sides

v2' = (v2 / T) t the "v T" of aa91 lines up with the adjacent of (e) with v3

$$v_2{}' = \frac{v_2}{T} \cdot t$$

aa93.png an (e1) and on right (e2) with "v" left and bigger "c" left labels outward above and below with v below

$v' = v \cdot (\frac{c-v}{c})$

We define a new ratio t', $t' = \frac{v'}{v}$ (For $T=1$) Or the equivalent $\frac{t}{T}$, or t for $T=1$. And therefore, $\frac{v'}{t'} = v$.

4: ?

??: c' = ? c

??: v = e2's vel in e1's POV ?

"v" is then e_2's velocity in e_1's POV.

Considering: $v' = v \cdot (\frac{c-v}{c})$ On the right side is the ratio, of the net light speed $(c-v)$ relative to e_2's speed v , to, the real absolute light-speed with e_2 still, c (or in other words, in e_1's POV, e_1 being still). For $c=1$ and $v=0.5$, $v' = 0.5 \cdot (\frac{1-0.5}{1}) = 0.25$ and $t' = \frac{0.25}{0.5} = 0.5$. And $\frac{c}{t'} - v = \frac{1}{0.5} - 0.5 = 1.5$, which states that, if velocity $v=0.5$, and the mover's length is compressed by $t'=0.5$ then, then the new, now faster, speed, with the compressed size, of light, is 2c , and if the speed of the mover in this new space weren't compressed, the separation of light ahead, the gain, is 1.5c . v' is then the world-apparent resulting speed, scaled to accommodate light to give a separation of c. And v by itself is the under-hood (to e_1's POV), true, hidden variable of speed. Likwise, $\frac{c}{t'} - v \cdot T' = \frac{1}{0.5} - 0.5 \cdot 2 = 1 = c$ and $\frac{c}{t'} - \frac{v}{t'} = c$. The component of velocity v in the same direction as the component of light of c , must be used to make sense of the directionality of time dilation. From the previous equations, $\frac{v'}{v} = 1 - \frac{v}{c}$ follows.

aa94.png an (e2) with right arrow "vx", up ray to "c" (which has arrow right to right-top corner), and up-right ray to top-right corner and (e1) is on the right side there

aa95.png a ray up-right with "c T" an arrow right with "v T" they are of equal length along x axis right

Using $-\cos(\angle(vT, cT)) \cdot 2 \cdot vT \cdot cT + (vT)^2 + (cT)^2 = (ct)^2$, if we take the case where the velocity direction of e_2 is aligned with the shooting of a flashlight, $\cos(0°) = \frac{adjacent}{hypotenuse} = 1$, and $c=1$, $v=0.5$, and $T=1$, then $(-1) \cdot 2 \cdot 0.5 \cdot 1 + 0.25 + 1 = (ct)^2 = 0.25$ and $t=0.5$. The angle between the velocity in the perspective of e_1, of e_2's velocity, and the angle that e_2 shoots the light at, in it's own reference frame (still frame of view), as is the angle that e_2 shoots its flashlight at and the opposite direction that it observes e_1 move relative to e_2's frame, is the angle $\angle(vT, cT)$. If the angle is a right angle, then the equation reduces to the classical equation, however, the component of vT is T . And with that, we can apply t' to velocity and acceleration.

aa96.png a small triangle with right angle on the bottom left and below :

cx = vx => angle(vT,ct) = 90 degrees [the component of light and velocity on x, is an angle of 90 degrees for ?? the angle of 90 would have to be for vT,ct for …. well we can compare components somehow]

aa97.png (e2) at bottom left (e1) right a velocity "vx" right to an inclined emitter plate, directed to a point straight away from it right-up and there are two plates for reception and transmission, two sets left and right, from (e2), to "vx" end there are rays from emitter1 to receiver1 and emitter1 to receiver2

For $c=5$ and $v=2$, $v'=2\cdot(\frac{5-2}{5})=\frac{6}{5}$. Remember that $\frac{c}{t'}-\frac{v}{t'}=c$ and therefore $\frac{5}{(\frac{3}{5})}-\frac{2}{(\frac{3}{5})}=\frac{25}{3}-\frac{10}{3}=5$. And using the cosine equation: $-1\cdot 2\cdot 2\cdot 5+4+25=25\cdot t^2$ and $\sqrt{(\frac{(25+4-20)}{25})}=t=\sqrt{\frac{9}{25}}=\frac{3}{5}$. We can also see, $c-v=c\cdot t'$ and $c-v\cdot t'=c\cdot t'+\frac{v^2}{c}$.

appl(ication?y?) to aa98.png small right-triangle with square angle bottom-right :
(c T)^2 + (v T)^2 = (c t)^2

Using the original equation: $(ct)^2+(vT)^2=(cT)^2$ and $t=\sqrt{(cT)^2-(vT)^2}=\sqrt{1-0.25}\approx 0.866$, but $\frac{5-2}{0.866}\approx 3.46\neq 5$. As for $t=\sqrt{-\cos(0°)\cdot 2\cdot vT\cdot cT+(vT)^2+(cT)^2}=\sqrt{\frac{(29-20)}{25}}=\frac{3}{5}=T\cdot\frac{c-v}{c}$, for $\angle(vT, cT)=0°$, it means that the original equation does not provide the necessary value to give c separation with v . Whether we add velocity ($\frac{c+v}{c}$), or subtract ($\frac{c-v}{c}$), depends on whether velocity and the direction of light are positive or negative.

aa90.png a dot at the bottom on the left, on the right it says "0 c" and above it is an arrow and says "2 c" on the right

$$v'=v\cdot\frac{c-v}{c}=2\cdot\frac{1-2}{1}=-2 \quad t'=\frac{v'}{v}=\frac{-2}{2}=-1 \quad \frac{v'}{t'}=v \quad \frac{c}{t'}-\frac{v}{t'}=c$$

If we consider the case where $v=2c$, the dilation is such that velocity is negative. For $c=1$ and $\downarrow v'=\downarrow v\cdot\frac{\uparrow c+\uparrow v}{\uparrow c}=6=\downarrow v\cdot\frac{-\uparrow c-\uparrow v}{-\uparrow c}$, $\downarrow t'=-3$, $\frac{\downarrow v'}{\downarrow t'}=\downarrow v$, and $\downarrow v=-2$. For $t'=-1$, $a_y'=a_y\cdot t'=-a_y$. We define the subsequent $x_2'=x_1'+v\cdot t'$ and $\downarrow a_y'=t'\cdot\downarrow a_y$. We define

$v'=\Delta x'$ and $\frac{v'}{v}=\frac{\Delta x'}{\Delta x}$.

aa82.png a dot origin with an arrow above upward

$\frac{1}{3}\cdot c=(f\cdot\frac{1}{c})\cdot\lambda \quad f=\frac{1}{t} \quad 3\cdot c=f\cdot(\lambda\cdot 3) \quad \lambda=D \quad f\cdot\lambda=c$

aa82.png same

aa83.png dot origin at the bottom with arrow on the right going up, and from the top a bigger arrow going down on the dot with crests emerging from the top, intersecting the arrow (ie a light source) and (e2) at the left of the dot

$(c+v)=f\cdot\lambda+v \quad T'\cdot(c+v)=T'\cdot(f\cdot\lambda+v)$

$\uparrow\lambda'=\uparrow\lambda\cdot\frac{c-\uparrow v}{c}$ In the simple case with no time-dilation of velocity.

$\uparrow\lambda''=\uparrow\lambda\cdot\frac{c-\uparrow v'}{c}$ In the case where time-dilation comes into effect.

$\uparrow T'\cdot(f\cdot\lambda+\downarrow v)=c \quad \lambda=\frac{\frac{c}{\uparrow T'}-\downarrow v}{f}$

$\uparrow T'=\frac{c}{c-\uparrow v}\neq-(\frac{c}{c-\downarrow v}) \quad \uparrow v'=\uparrow v\cdot\frac{c-|\uparrow v|}{c}\neq-(\downarrow v\cdot\frac{c-\downarrow v}{c})\neq\uparrow v\cdot\frac{c-\uparrow v}{c}$

$\uparrow f''=\frac{\uparrow f}{1+\frac{\downarrow v'}{c}} \quad \uparrow\lambda''=\uparrow\lambda\cdot(1+\frac{\downarrow v'}{c})$

$(f\cdot 3)\cdot(\lambda\frac{1}{3})=c \quad c+v=f\cdot\lambda+v \quad t'\cdot(c+v)=t'\cdot(f\cdot\lambda+v)$

$\frac{\downarrow f\cdot\downarrow\lambda+\uparrow v}{\downarrow t'}=c \quad \frac{(\frac{\uparrow c-\uparrow v'}{\uparrow c})}{\uparrow f}=\uparrow\lambda''$ (For $\uparrow(v')>0$)

$\uparrow f''=\frac{\uparrow f}{(\frac{\downarrow(v')+\uparrow c}{\uparrow c})}=\frac{\uparrow f}{(1-\frac{(c\cdot\uparrow t'-f\cdot\lambda\cdot\uparrow t'^2)}{c})}$

Thus is the away-effect of velocity (red-shift).

13:

[according https://en.wikipedia.org/wiki/Relativistic_Doppler_effect v away gives
lambda + vt = c t
t = lambdaemit / (c – v) = c / ((c – v) femit) = 1 / ((1 – beta) femit)
t0 = t / gamma observed t0
gamma = 1 / sqrt(1 – beta^2)
f0 = 1 / t0 = gamma (1 – beta) femit = sqrt((1 – beta) / (1 + beta)) femit f0 observed
femit / f0 = sqrt((1 + beta) / (1 – beta)) ← doppler factor
lambda0 / lambdaemit = femit / f0 = doppler factor^^ sqrt
z = (lambda0 – lambdaemit) / lambdaemit = (femit – f0) / f0 and z = doppler factor^^ sqrt – 1
z ~= beta = v/c where v<<c red-shift approximation classical doppler]

^^^ f0 = (c – v) / lambdaemit => lambda0 = c lambdaemit / (c – v) => f0 = femit (c – v) / c
for v away show seconds arrive, send for c 1,2

f' = f / (1 + (1 / t' – f lambda / c)) != f / t' ; but is= f t' lambda' = lambda / t'

z = 11 z = (lambda ob – lambda em) / lambda em z = (lambda' – lambda) / lambda

lambda = 1 => t' = (1/12)

lambda = 0.5 => t' = (1/12)

This can be checked as, given $\lambda=1$ or $\lambda=0.5$, $T'=\frac{1}{12}$.

############ALL AFTER HERE LOOK IN ACSP191BIGGER.ODT !!!!!!!!!

aa80.png an angle arc between two lines arrows from (e2) center below, on the left “vT” below it and a dash-dash on the middle of the arrow to mean measured, and on the right and up a wavy arrow, and directly on the same the same distance away as the left arrow but no segment, and a corner straight-angle marker to indicate the end, with (e1) marked below, and at this point going up is where the ray above stops horizontally

aa81.png as same above, but angle 180 degrees, with the ray flat on the other side and (e2),(e1),(vT) marked and a directional arrow to the left under (e2) and in the angle marker is a arc arrow showing a turn to the left with “-180 degrees” above

3 * 2 10 * 2
v T = 6 c T = 20

(c t)^2 = - cos(angle cT,vT) * 2 * vT * cT + (v T)^2 + (c T)^2

t^2 = (2 * 6 * 20 + 36 + 400) / 100 = 6.76

t = +/- sqrt(6.76) = 2.6 t/T = 1.3

10/(1.3) - (-3)/(1.3) = 10   c/t' – v/t' = c

For a $t'<1$, it means that e_2 is younger.

$$\frac{1}{\uparrow t'}+\frac{\downarrow v}{\uparrow t'\cdot\uparrow c}=1 \qquad \frac{1}{\uparrow t'}-1=\frac{\uparrow v}{\uparrow t'\cdot\uparrow c} \quad \text{(v>0;v<0?)}$$

$$\uparrow T'\cdot(f\cdot\lambda+\downarrow v)=c \qquad \uparrow T'\cdot(c+\downarrow v)=c \qquad \uparrow T'\cdot c+\uparrow T'\cdot\downarrow v=c$$

$$\uparrow T'+\frac{\uparrow T'\cdot\downarrow v}{c}=1 \qquad \uparrow T'-1=\frac{-\uparrow T'\cdot\downarrow v}{c}=\frac{-\downarrow V'}{c} \qquad \frac{\downarrow V'}{\downarrow v}-1=\frac{-\downarrow V'}{c} \quad \text{(For } \downarrow v<0 \text{)}$$

$$\uparrow T'\cdot\uparrow v=\frac{\uparrow T}{\uparrow t}\cdot\uparrow v=\uparrow V' \quad \text{(For } \uparrow v>0 \text{)}$$

For all observers, the speed of light will be observed to be c, the absolute speed will not exceed c, but the observed speed can exceed c in another POV.

measure c <u>behind</u> v

According to the linear Hubble's law: $z=\frac{(\lambda_{observed}-\lambda_{emitted})}{\lambda_{emitted}}$. Therefore: $z=\frac{(\lambda\cdot t''-\lambda)}{\lambda}$, where $t''=t'(v')=\frac{c-v'}{c}$.

z = (lam' – lam) / lam
z = (lam t' – lam) / lam
f/t' = f t'
lam' = lam t'

$$v'=v\cdot(\frac{c-v}{c})$$

aa79.png   a dot origin and an arrow shorter on the right going right with “v” on the right side, and below it a longer ray “c”

aa80.png   a dot origin and an arrow shorter on the left going up with “v” on the right side, and on the right of the dot, a wavy long ray “c” on its right going down

For $v<0$ and $c>0$, $v'=v\cdot(\frac{c+v}{c})$ and $\frac{v'}{v}=t'<1$.

t' (f lambda + v) = c   =>   t' = (c+v)/c   v>0   c>0   aa81.png same as VV with dot origin, “v” above shorter going right, “c” below longer going right

=> t' (f lambda – v) = c   N: 1/t'...
c + v < c   ← wrong!   Correct: c - v > c

$\uparrow T'\cdot(f\cdot\lambda+\downarrow v)=c$

aa82.png dot origin, “c” on the left, with ray below going left, arrow on the right going right shorter with “v” below 24PP

If not v' is added to x, then what use is v'?
therefor 1.) light speed will be observed to be c => R16#XXXX

2.) the hidden variable speed (to e1 POV) can exceed c.

3.) the time-dilated speed, effectual never > c

4.) to e2, c is constant

$$\frac{f\cdot\lambda-v}{t'}=c \quad t'\cdot c=f\cdot\lambda-v \quad \lambda=\frac{(t'\cdot c+v)}{f} \quad f=\frac{(t'\cdot c+v)}{\lambda} \quad v=f\cdot\lambda-t'\cdot c$$

$$f'=\frac{f}{1-\frac{v}{c}} \quad \lambda'=\lambda\cdot(1-\frac{v}{c})$$

This is the result of blue-shift, i.e., where $v>0$ and we're measuring the direction $c>0$ and $v<c$ or else then the $v'<0$ and it becomes red-shift. Alternatively, we may look at it as $f'=-f$ for $v=2c$, however this is only correct in one direction.

$$f'=\frac{f}{1-\frac{f\cdot\lambda-t'\cdot c}{c}} \quad \lambda'=\lambda\cdot(1-\frac{f\cdot\lambda-t'\cdot c}{c})=\lambda\cdot(1-\frac{f\cdot\lambda}{c}+t')=\lambda\cdot t'$$

For GN-z11,

$$z=11=\frac{\lambda''-\lambda}{\lambda}=\frac{\lambda\cdot t''-\lambda}{\lambda} \quad t''=12 \quad v'=-(t''\cdot c-c)=-(12\text{c}-c)=c-12\text{c}=-11\text{c}$$

aa78.png a dot origin with a shorter velocity arrow above with “v” on the right side, going pointing up, and a longer, wavy ray of light going down with “c” on its right

$$\frac{c-v}{t'}=c \quad \frac{1}{t'}-\frac{1}{t'}\cdot\frac{v}{c}=1 \quad \frac{1}{t'}-1=\frac{1}{t'}\cdot\frac{v}{c} \quad \frac{1}{t'}-1=\frac{v^2}{v'\cdot c} \quad \frac{v}{v'}-1=\frac{v^2}{v'\cdot c} \quad 1-\frac{v'}{v}=\frac{v}{c}$$

¿

aa77.png dot origin, with a wavy ray arrow of light above pointing and below pointing (two rays away) and beside the top ray is a shorter, straight arrow with “v” on the right (and the rays have “c” on their right) and the top part is labeled “younger” and the bottom “older”

$$1-t'=\frac{v}{c}$$

With all of this, we must consider the sign of c , v , and the relation to f , whether it grows or decreases, with the direction of the receiver.

t ' < 1 (younger)   aa75.png   point origin at the bottom with detatched wavy light ray arrow above with "c" on the right side, and another, shorter, straight arrow on the right with "v" on its side …. ie the case where emitter of light (dot) is also moving forward in the same direction, leading to an increase of frequency (blue-shift) in the receiving side
f++ lambda--   v>c?

$$\frac{1}{t'}\cdot(f\cdot\lambda-v)=c \quad t'\cdot c=f\cdot\lambda-v \quad f\cdot\lambda=t'\cdot c+v \quad \lambda=\frac{t'\cdot c+v}{f} \quad f=\frac{t'\cdot c+v}{\lambda} \quad v=f\cdot\lambda-t'\cdot c$$

For the case where $v<0$ (red-shift) and $v>0$ measures velocity away:

$$f'=f\cdot(1+\frac{v}{c}) \quad \lambda'=\frac{\lambda}{1+\frac{v}{c}} \quad f'=f\cdot(1+\frac{f\cdot\lambda-t'\cdot c}{c}) \quad \lambda'=\frac{\lambda}{1+\frac{f\cdot\lambda-t'\cdot c}{c}}=\frac{\lambda}{1+\frac{f\cdot\lambda}{c}-t'}$$

Mich-Mor ex.

> length contraction
!= time-dilation

In the Michelson-Morley experiment, it does not indicate that length contraction is equivalent to time-dilaiton.

aa73.png triangle of hypotenuse c T ; adjacent at the bottom of v T ;   and on the right opposite is c t   and the hypotenuse has a wavy light-speed ray arrow from corner on the bottom left going to the top right

aa74.png   a wavy light-speed arrow going from bottom to top with a flat line at the top and the bottom as the emitter at the bottom and a receiver at the top with "c t" on the right

aa70.png triangle of   c (proper t symbol) T / t of hypotenuse ; and v (proper t symbol) T / t of adjacent at bottom ; and no label for opposite side

aa71.png triangle with wavy light-speed arrow from left corner up along hypotenuse with hypotenuse of c (proper t symbol) ;   adjacent at bottom of v (proper t symbol) ; and opposite at right of c (proper t symbol) gamma

underneath aa70.png (for meaning of missing vertical label of the right side of the triangle) :
aa72.png   two flat lines above and below, with a wavy light-speed arrow in between going from the bottom to the top, with the label "c (proper t symbol) * gamma" on the right

Where $\gamma < 1$, for length-contraction of the coordinate y , $y' = y \cdot \gamma$. According to the original: $c \cdot \tau = \sqrt{(c \cdot \tau \cdot \gamma)^2 + (v \cdot \tau)^2}$. It is as though *extra* space appears (in front) as it is traversed.

aa69.png (e2) electron ball with straight arrow of velocity to the right, and a longer, wavy arrow of light to the right

The spaces expand, so, from the outside, keeping the spaces constant, it is as if the mover is squished.

aa68.png sideways-squished ball electron with arrow to the right in front and a line segment behind it ("whizzing by" swoosh?)

aa64.png vertical segment with ½ on the left and on the right an arrow going up from a point origin at the bottom, and on its right "v=11" and further "t ?"

aa65.png just a vertical segment with a dot origin at the bottom (right under the segment), with another segment underneath of aa66.png (and there's an aa67.png underneath aa64.png and together these four vertical segments for each image, with a single dot point origin in the left and right, form a single greater image) and on the right is "-12" (of aa65.png)

aa66.png (below aa65.png) (same point origin above is the same as the origin of aa65.png above) shows "12" on the right

aa67.png (below aa64.png) (same point origin above is the same as the origin of aa64.png above) just says "L" on the right

If we try to apply the forward gamma:

$$\frac{c-13}{c} = -12 \qquad \frac{c-(-13)}{c} = 14 \qquad \frac{c-11}{c} = -10 \qquad \frac{c-(-11)}{c} = 12 \qquad \uparrow v' = \uparrow v \cdot -12 \qquad \uparrow a' = \uparrow a \cdot -12$$

It would be interesting to apply this transformation of acceleration (and velocity) to the loop example given earlier to give a continuous path. Could it be that another transformation of $a' = -12$ leads to $v' = +12$ (i.e., an acceleration $|a| > c$ causing another reversal of the sign of velocity)?

aa62.png single dot origin, with light wavy ray arrow going left with "c" and straight arrow shorter going right "v"

For the example above: $-\cos(180°) \cdot 2 \cdot (-11) + 121 + 1 = (c \cdot t')^2$. With the angle $180°$ but velocity $v = -11$, $-22 + 122 = t'^2$ $t' = 10$, the angle $180°$ and negative velocity therefore cancel out, to give the forward gamma. However, the gamma must be $t' = -10$ as in the previous example, so the simpler equation must be used, or else the sign of the square root adjusted to match the forward equation solution.

aa63.png single dot origin again, with both "c" wavy arrow longer, and shorter straight arrow "v", going right

With $-\cos(0°) \cdot 2 \cdot (11) + 121 + 1 = (c \cdot t')^2$ the result is still $t' = 10$. Different $|z|$ values on different sides of the moving electron may give the same general $|v|$. At a' and v' at the back-side increase with increasing $|v|$ toward an attractive object (i.e., with $v>c$ giving $t'<0$ and thus a negative v and a, as would be for GN-z11), but because the distance to the attractor is decreasing, even that doesn't help slow it down.

$\uparrow x'=\uparrow x\cdot(-10)$ $\downarrow x'=\downarrow x\cdot 12$ $\Delta(\uparrow x',\downarrow x')=2$ So, even though the new $\uparrow x$ is negative, there is still room between $\uparrow x$ and $\downarrow x$ for chemical activities. At most, a $\uparrow F=1$ and $\downarrow F=1$ still give $\Delta(\uparrow F)'=2$ net force separation, because a $\uparrow F=1$ is $(\uparrow F)'=-10$ and $\downarrow F=1$ is $(\uparrow F)'=-12$.

aa61.png (e) going down to (P) with arrow generic no v, c labels

$\uparrow F=1$ gives $\Delta(\uparrow F)'=-10$, $\uparrow F=0$ gives $\Delta(\uparrow F)'=0$, and $\downarrow F=1$ gives $\Delta(\uparrow F)'=-12$.

To the still e_1's POV, it appears that e_2 still moves at v absolute, and only a' changes. And still, $\uparrow a_{free}>\downarrow a'$, that is, the free acceleration effect on the current velocity is stronger than the backward acceleration, so GN-z11 continues accelerating. Perhaps the galaxy rotation curves of extra velocity can be explained by free acceleration.

Perhaps v' is the apparent velocity to both e_1 and e_2?

Aa60.png (e2) headed to (e1) with arrow of v and ray zig-zag arrow of light c

Then $v'=v\cdot(\frac{c-v}{c})=(-10)\cdot(\frac{c-(-10)}{c})=-110$ and given a universal age of $13.82\times 10^9 y$ it would be

$$110\cdot 299{,}792{,}458\frac{m}{s}\cdot 60\frac{s}{min}\cdot 60\frac{min}{hour}\cdot 24\frac{hour}{day}\cdot 365\frac{day}{y}\cdot 13.82\times 10^9 y=1.43\times 10^{25} km=1.52\times 10^{12} ly .$$

Does it make sense that the spacing in front contracts by a factor $\frac{1}{\gamma}$, leading to $\uparrow a'=\uparrow a\cdot\gamma$, adding to velocity, giving $\uparrow v$, which is then again increased by factor γ, giving $\Delta x=K\cdot\gamma^2$. When e_2 slows down, moves out of contracted space (is relaxed back to normal shape), the acceleration and velocity should relax back too. So $\frac{\gamma_2}{\gamma_1}$ must be used, in $v_2=v_1\cdot\frac{\gamma_2}{\gamma_1}$. The previous velocity is adjusted during velocity change and acceleration. At the $v=c$ point, $\frac{c-v}{c}=0=\gamma_1$ and $\frac{\gamma_2}{\gamma_1}=\frac{\gamma_2}{0}=\infty$, therefore. The sequence is $v'=v\cdot\gamma_1$, $v_2=v+a$, and then $v_2'=(\frac{v_1}{\gamma_1})\cdot\gamma_2$.

aa50.png e2 to P of length with brackets measured length of “1”

leading to, with arrow,

aa51.png e2 and P again, now with length of “2” showing longer length double almost of previous, because of gamma = ½ gamma = ½ ^^ text under figure

showing => arrow to : a' =

With $\gamma = \frac{1}{2}$, the spacing $D=1$ increases to $D'=2=\frac{1}{\gamma}$, therefore the effect on acceleration across D , $a(D)=\frac{G \cdot M}{D^2}$, is $a(\frac{D}{\gamma})-a(D)$ or $\frac{a(\frac{D}{\gamma})}{a(D)}$. If we consider $v=1$, then in this case $v'=1=v \cdot \gamma$. Then $v'-v=v \cdot \gamma - v$ and $\frac{v'}{v}=\frac{v \cdot \gamma}{v}=\gamma$ for $v'=\gamma \cdot v$. $v_2=v_1 \cdot \gamma_2=(v_0 \cdot \gamma_1) \cdot \gamma_2$, perhaps? For velocity as a function of the distance, $\frac{v}{D}(D)=\frac{v_0}{D}$, $\tau=\frac{D}{v}(D)=\frac{D}{v_0}$. We may compute $\frac{D}{v}(\frac{D}{\gamma})-\frac{D}{v}(D)$, and have $\frac{\frac{D}{v}(\frac{D}{\gamma})}{\frac{D}{v}(D)}=\frac{\frac{D}{v_0 \cdot \gamma}}{\frac{D}{v_0}}=\frac{1}{\gamma}$. How much would $a':a$ compare with $D'=\frac{D}{\gamma}$? Because $\frac{(\frac{G \cdot M}{(\frac{D^2}{\gamma^2})})}{(\frac{G \cdot M}{D^2})}=\gamma^2$, it follows that $a'=a \cdot \gamma^2$. In the end, for mechanics, we only care about $v_2{}'$ from v_2 , not $v_1{}'$, so $v_2=v_1 \cdot \gamma + a'$. The " v " is a hidden variable, the true, absolute value.

From $\gamma_1=\frac{1}{2}$ to $\gamma_2=\frac{1}{4}$, it means that velocity turns from $v_2=\frac{1}{2}v_1$ to $v_2=v_1\frac{\gamma_2}{\gamma_1}+a'$, the result of a speed-up in the front. Length of spacing along the x-axis, L_x , increases, while the size of the object in front along the x-axis, s_x , decreases. From a speed-up up to c , the dilation goes from $\gamma_1=\frac{1}{2}$ to $\gamma_2=0$, the velocity to $v_2=\frac{0}{(\frac{1}{2})}v_1+a'$, so $v_2=a'$. Slowing down from c , to $\frac{c}{2}$, spacing L_x decreases, while s_x increases, according to $v_2=\frac{(\frac{1}{2})}{0}v_1+a'=\infty+a'$. In $v_2=v_1+a'$, the gamma is $\gamma_1=\frac{c-v_1}{c}$, while v_2 leads to $\gamma_2=\frac{c-v_2}{c}$, giving $v_2{}'=v_1\frac{\gamma_2}{\gamma_1}+a'$, so it makes more sense to write it as $v_2{}'=v_2\frac{\gamma_2}{\gamma_1}+a'$ now. Getting the gamma $\frac{\gamma_2}{\gamma_1}$ from $a':a$ gives $a_2{}':a_1{}'=\gamma^2$, if we have only the $a_2{}'$ and $a_1{}'$ to work with, and $\sqrt{\frac{a_2{}'}{a_1{}'}}=\gamma=\frac{\gamma_2}{\gamma_1}$. When D changes by $\frac{1}{\gamma}$, the *previous* v changes by the new γ , and acceleration a' automatically depends on $\frac{D}{\gamma_{previous}}$ or $\frac{D}{\gamma_{new}}$. So, after $x+v$ is used to obtain the new x, is v adjusted by γ_{new} then, for the next iteration? So the sequence would be $\gamma_{new\,of\ previous}=\gamma_1=\frac{c-v_1}{c}$ and then $v_2=v_1$, or $v_2{}'=v_2\frac{\gamma_2}{\gamma_1}$. When v changes, γ changes, but v only changes with a. So the *previous* a must be added to v. $v_2=v_1+a_1$, where the previous gamma is perhaps $\gamma_0=\frac{c-v_0}{c}=1$, set to unity before any movement takes place. This then leads to the gamma $\gamma_2=\frac{c-v_2}{c}$, leading to $v_2{}'=v_2\frac{\gamma_2}{\gamma_1}$, leading to $x'=x+v_2{}'$, where $a_2=a(\frac{D}{\gamma_2})$. All the v_2, a_2, and x_2 depend on $\frac{D}{\gamma_1}$. Or, we might have $x'=x+v_2$ and $v_1=v_2{}'$, leading to a cycle.

Or, we may just store the absolute value v to get $v_2{}'$, i.e., $v_2=v_1+a_1$, $a_1=a(\frac{D}{\gamma_1})$, $\gamma_1=1$, $a(\frac{D}{\gamma_1})=\frac{G\cdot M\cdot\gamma_1{}^2}{D^2}$, and we know that $v_2=\frac{v_2{}'}{\gamma_2}\neq\infty$ for $\gamma_2=0$, so $v_3=v_2{}'\frac{\gamma_3}{\gamma_2}=v_2\gamma_3$. $v_2=v_2{}'\frac{\gamma_1}{\gamma_2}$ for $\gamma_2=0$ and $v_2\neq\infty$, so we will arrange the sequence as $v_3=v_2{}'+a_3$, and $v_3{}'=v_3\frac{\gamma_3}{\gamma_2}$.

Where we have the unknown $v_2{}'=v_2\frac{\gamma_2}{\gamma_1}$ for $\gamma_1=0$, we have the known $v_2=v_2{}'\frac{\gamma_1}{\gamma_2}$, which we store, and therefore we skip $v_1=v_2\frac{\gamma_2}{\gamma_1}$. $v_2=v_1+a_1$, and for $\gamma_1=0$ and $v_1{}'=0$, $v_2=a_1$. Then $v_2{}'=a_1\frac{\gamma_2}{\gamma_1}$, so $v_2{}'=0$ because $a(\frac{D}{\gamma_1})=\frac{G\cdot M\cdot\gamma^2}{D^2}=0$.

$$\lim_{x\to 0}\frac{0}{x}=0 \quad \lim_{x\to 0}\frac{x}{0}=\infty \quad \lim_{x\to 0}\frac{x}{x}=1 \quad \lim_{x\to 0}\frac{1-x}{x-1}=1$$

How do we make sense of $v_2{}'=a_1\frac{\gamma_2}{\gamma_1}=0\frac{\gamma_2}{0}=C\gamma_2 m/s$?

For $\uparrow F=1$, $\downarrow F=1$, $\uparrow\gamma=-10$, and $\downarrow\gamma=12$, $\uparrow F'=-100$, $\downarrow F'=144$, and $\uparrow F_{net}{}'=\Delta(\uparrow F)'=-44$, giving a range of $[-100,-144]$, without free acceleration.

If $a\cdot 0_0=0_1$, then necessarily $\frac{0_1}{0_0}=a$, if we have the same occurrence of variables to produce 0_0 and 0_1. So, $v_0{}'=v_0\frac{\gamma_0}{\gamma_{-1}}=v_0\frac{0_0}{\gamma_{-1}}=0_1$, where $\gamma_0=0_0$, giving

$v_1{}'=v_1\frac{\gamma_1}{\gamma_0}=(v_0{}'+a_0)\frac{\gamma_1}{\gamma_0}=(0_1+0)\frac{\gamma_1}{0_0}=(\frac{v_0}{\gamma_{-1}}+0)\gamma_1=v_0\frac{\gamma_1}{\gamma_{-1}}$. And $a_0=a(\frac{D}{\gamma_0})=\frac{G\cdot M\cdot\gamma_0^2}{D^2}=0_2$, and $a_{-1}=a(\frac{0}{\gamma_{-1}})=\frac{G\cdot M\cdot\gamma_{-1}{}^2}{D^2}$, so if we were to obtain a_0 from a_{-1} , $a_0=a_{-1}\frac{\gamma_0{}^2}{\gamma_{-1}{}^2}=0_2=a_{-1}\frac{0_0{}^2}{\gamma_{-1}{}^2}$.

$v_1{}'=v_1\frac{\gamma_1}{\gamma_0}=(v_0{}'+a_0)\frac{\gamma_1}{\gamma_0}=(0_1+0_2)\frac{\gamma_1}{0_0}=(v_0\frac{0_0}{\gamma_{-1}}+a_{-1}\frac{0_0{}^2}{\gamma_{-1}{}^2})\frac{\gamma_1}{0_0}=(\frac{v_0}{\gamma_{-1}}+a_{-1}\frac{0_0}{\gamma_{-1}{}^2})\gamma_1=(\frac{v_0}{\gamma_{-1}}+0_3)\gamma_1=(\frac{v_0}{\gamma_{-1}})\gamma_1$, where $v_0=v_{-1}{}'+a_{-1}$, gives $v_1{}'=v_0\frac{\gamma_1}{\gamma_{-1}}$. As we measure x in $\lim_{x\to 0}¿$, and $v\to c$ and therefore $\uparrow v'\to 0$ and $\uparrow a'\to 0$, then must it always be that $|x'|<c$? Then what of cases where $x\neq 0$ just before the transition to $v=c$, or $v>c$, and free acceleration? Rather, $v_1{}'=v_0\frac{\gamma_1}{\gamma_{-1}}$ is the case after slowing down from c , but that is $\downarrow v$, and what is the continuous curve for x position and v ?

For electrons e_2 and e_3, $x_2-x_3=\frac{x_2{}'-x_3{}'}{\gamma}$, i.e., the separation between them in the new, dilated frame of reference, must be the same as in the previous. And $x_{2,2}=x_{2,1}+v_2$ and $x_2{}'=x_2\gamma$, where $\gamma_2=\gamma(x_2)$ is a function of x_2 . But to e_2, $x_2{}'-x_3{}'=(x_2-x_3)\gamma_2$, the separation appears the same under the gamma, which means that, $a_2{}'=a_2\gamma_2{}^2$. But if there is length-contraction, then the forces must be unaffected, so $a_2{}'=a_2$, and there must not appear to be any changes with respect to the rest of the world, then, with no transformation, but, for e_1 and e_2, if $a_2{}'$ does not change then what is length contraction, or then it must only appear after the movement is contracted. So does e_2 decrease acceleration $a_2{}'$ after the γ_2 velocity change, or not? Or does that only change future changes to $a_2{}'$? If they are co-moving they will gradually contract and expand together, and differences only appear when there is a difference in v , if e_2 and e_3 are co-accelerating, and one is in front of the other, through a uniform acceleration field. Is it necessary to store all connection distances, to simulate the physics? Then what is light propagation in absolute terms, if they have no acceleration force change between each other? Then what does distance matter? Or else, it does, and then they will have a difference in v , like e_1 and e_2. Will the rate of change of $a_2{}'$ change by $\gamma_2{}^2$ with respect to time?

In a black hole singularity, where $\gamma=\sqrt{1-\frac{2\cdot G\cdot M}{r\cdot c^2}}$ becomes complex, the new $\gamma=\frac{c-v_{escape}}{c}$ can be used. The transformation then is $v'=v\gamma$ and $a'=a\gamma^2$.

Let us consider the equation $E=mc^2$. According to the equivalence principle, “We shall therefore assume the complete physical equivalence of a gravitational field and a corresponding acceleration of the reference system.” We can then assume that an acceleration energy exerted can also be calculated for gravity. Given the mass of the gravity source, we can calculate the work done to accelerate.

$$a=\frac{GM}{D^2}\qquad E=M\,a\,D=\frac{M^2 G\,D}{D^2}=\frac{M^2 G}{D}$$

However, we must not confuse the mass of the object being accelerated m , to the mass of the attractor M, and the distance accelerated d, to the distance of separation between the objects D.

$$E=\frac{M\,m\,G}{D} \qquad E=\frac{M\,m\,G\,d}{D^2}$$

If the distance d accelerated is equal to the distance light would travel in time t, $d=ct$, the time t is given by $a=\frac{G\,M}{D^2}=\frac{K}{(ct)^2}$. Alternatively, $d=a\,t^2$, distance traversed d is the amount traversed at the gravitational acceleration a over interval t, where $t=\frac{d}{c}$, that is, the time t that it takes light to traverse d, so $d=a\frac{d^2}{c^2}$, giving $1=a\frac{d}{c^2}$ and therefore $d=\frac{c^2}{a}$, that is, the distance traversed d will be the speed of light squared over the acceleration of the gravity. So $E=\frac{M^2 G\,c^2}{a\,D^2}=\frac{M^2 G\,c^2 D^2}{G\,M\,D^2}=M\,c^2$ if we equate $M=m$ and $a=\frac{G\,M}{D^2}$. Distance d is then that, which that acceleration a covers to give work E, is the acceleration times t^2 time amount, of the time that it would take to accelerate to light-speed at the acceleration a. So, with higher acceleration (higher mass), the time is less, so distance is less, so energy is less (which seems wrong). The potential energy of acceleration should be higher with a higher mass M, though with lower d. The work that would be done, given d, would be less? To acceleration at a different a with same d, i.e., to the center of the source. In $E=F\,d$, distance d is only the distance used to accelerate, not the whole distance of the journey to the center. But any $F\,d>0$ will eventually get to the center, on coasting, so what is needed is to cover this distance d to the center, over the span it would take light c. Then $d=\frac{D}{c}$, or rather that is the time interval for d. Then $E=\frac{M\,m\,G\,D}{c\,D^2}$, which is wrong. We need a distance, $E=F\,D$, given $t=\frac{D}{c}$ and $v=\frac{D}{t}$. To achieve the same D with a higher acceleration mass M, in the same time as light would travel D (constant velocity), would take less t, thus less E, same as before. But do we use the v at the end of the acceleration to the center, or the net v over the span of the acceleration? The first would be $v_{end}=\int_0^{t_{end}} a(t)\,dt=c$. The second is then $v_{net}=\frac{D}{t}=\frac{D}{(\frac{D}{c})}=c$. Neither of which is useful. Perhaps we can calculate the net velocity as a function of end velocity, $v_{net}(v_{end})$. So we calculate E based on the required v_{end} to give c and satisfy $t=\frac{D}{c}$, a different meaning? And because v_{end} increases with D (same M and t), and increasing with M (same D and t), and not assuming the whole D is traversed, but rather D is a runway to acceleration a distance d, v_{end} increases with t (same d and M), i.e., same a over d, or same starting a at D, and if $E=F\,d=F\,D$ then $F=M\,a_{net}$ and $M\,a_{net}=M\,a_{avg}$? To get the average we would use $M\,a_{avg}=M\int_0^{t_{end}}\frac{a(t)\,dt}{t_{end}}$. But $a_{avg}t^2\neq\int_0^{t_{end}} a(t)\,dt$. The net offset is $x_{end}=a_{avg}t_{end}^2=\int_0^{t_{end}} a(t)\,dt^2=D$. And $a_{avg}=\frac{D}{t^2}$ then. But we don't know t. We want $v_{end}=c$, not $d=c\,t$. Then $a_{avg}t=c$, so t doesn't matter (it is dependent), and a_{net} is dependent on $v_{end}=c$. If we state it as $\int_0^{t_{end}} a(t)\,dt=c$ then is it that

$t_{end}=\frac{D}{c}$? If $\int_0^D \frac{a(x)\,dx}{D} t_{end}=c$ and $\int_0^D \frac{\frac{GM}{(D-x)^2}dx}{D} t_{end}=c$ so is it so that $t_{end}=\frac{D}{c}$?

$$\int_0^D \frac{a(x)\,dx\,t_{end}}{D}=c \qquad \int_0^D \frac{\frac{GM}{(D-x)^2}dx\,t_{end}}{D}=c$$

$$\frac{-(\frac{GM}{x-D})t_{end}}{D}\Big|_0^D=-(GM)(\frac{1}{D-D}-\frac{1}{0-D})\frac{t_{end}}{D}=-GM(\infty_0+\frac{1}{D})\frac{t_{end}}{D} \qquad t_{end}=\frac{1}{\infty_0}$$

$c=\frac{-GM\infty_0 t_{end}}{D}$ Which is not useful.

If we say that $\int_0^{t_{end}} x(t)\,dt=D$ then $t_{end}=\frac{c}{a_{avg}}$ and $\int_0^{\frac{c}{a_{avg}}} x(t)\,dt=D$. So $a_{avg}\to\infty$ as $x\to D$. If we define the distance d as a function of mass M, separation D, and time $t_{end}=\frac{c}{a_{avg}}$, then:

$$d(M,D,t_{end})=d(M,D,\frac{c}{a_{avg}})=d(M,D,\frac{c}{(\frac{\int_0^D a(x)\,dx}{D})})$$

$$\int_0^D \frac{GM}{(D-x)^2}\frac{t_{end}}{D}=c \qquad \int_0^D \frac{GM}{(D-x)^2}\frac{1}{D}=\frac{c}{t_{end}}$$

$$d(M,D,\frac{c}{(\frac{GM}{(D-x)^2}\frac{dx}{D})})$$

d(M,D,c/(integral from 0 to D { (GM/(D-x)^2) dx }/D))
d(M,D,c/(integral from 0 to D { (GM/(D-x)^2) dx }/D))...same inf0

over accel only d and tpreend=>
d(M,D,t) = E / F = (Mm G d / D^2) / (M aavg) =
(Mm G d / D^2) / (M (integral from 0 to tend { a(t) dt } / tpreend)) =
(Mm G d / D^2) / M (integral from 0 to d { (GM/(D-x)^2) dx } / d) =
(Mm G d^2 / D^2) / M (integral from 0 to d { (GM/(D-x)^2) dx }) =
v(d,t)=d/t... indet

1:18 pm:

v(d,t)=d/t... indet but... d<=D and x0=0... and a(x0)=GM/(D-x0)...
c=... t and d decided given starting ramp to c... and will be achieved by
x<D where a(D)=inf....
c = integral from 0 to d { (GM/(D-x)^2) dx } tpreend / d
c = integral from 0 to tpreend { (GM/(D-x(t))^2) dt }

tpreend = tramp
x(t) = integral from 0 to t { a(T) dT^2 } = ... loop problem =
x(t) = integral from 0 to t { GM/(D-x(T-dT))^2 dT^2 }

x(t) = integral from 0 to t { GM/(
(integral from 0 to T {GM/(D-x(Q-dQ))^2 dQ^2})
) dT^2 }

$$c=\int_0^{t_{ramp}} \frac{G\,M}{(D-x(t))^2}\,dt$$ This can be solved computationally for d, where $$d=\int_0^{t_{ramp}}\int_0^{t_{ramp}} \frac{G\,M}{(D-x(t))^2}\,dt\,dt$$.

E = Mm G d / D^2
E = Mm G (integral from 0 to d { (GM/(D-x)^2) dx } tramp / c) / D^2

so a lower accel at a farther D or smaller M, would give a greater d... more E
maybe calc d to DECEL from c at x0?...........
so lower accel at farther D or smaller M, would give
or, tramp how much time it would take from x0=D to ....
d' = D-d?
so lower accel at smaller M, would give lower d' BUT
lower accel at greater D, with M fixed, would give same d'?n 2D = d ^
so lower accel at greater D, gives lower d'->E

1:51 pm:

E = Mm G (D - (integral from 0 to d { (GM/(D-x)^2) dx } tramp / c)) / D^2

WRONG

d = a * (t^2)
t = d/c
d = a * (d^2/c^2) => 1 = a * d / c^2 => d = c^2/a

E = M^2 G c^2 / a D^2 = M^2 G c^2 D^2 / G M D^2 = M c^2

because a is const!

t is not time it would take light to traverse d to give v=c
only is time it would take given constant accel a to reach c!
but a->inf as t->tend
they all give infinites, but at different rates, thus smaller or bigger infins

2:16 pm:

not really work done to accelerate at all...
with d->D... greater D means more work... more energy?
so with d', where d'->0 as d->D as D->0 E->0
but with D->inf... E->inf... more work   BUT lower potential to accel...
overall more work at the end if to center... but between a closer
mass M and farther mass M at D, the
potential energy of the closer mass overpowers
so then particles go to the lower potential in this sense (Fd rather than Fd')

but not away from lower Fd'... if there is only one mass M
overall this is not acceleration and the exact path can't be directly determined
without accel..   but what energy in bh

3:16 pm:
35

tramp = D/c   tend > tramp must

xend = integral from 0 to tend of (a(t) dt^2) = D

integral from 0 to tramp of (a(t) dt^2) > D   for anet = xend

integral from 0 to tramp of (a(t) dt^2) / tramp > D / tramp = c

[edit ^^ wrong? D / tramp <= c   because   only D / last delta t = c ?]

integral from 0 to tramp of (a(t) dt) > c   but <<< IS effective end v, =c

left off

3:59 pm:
P16 36 - 41

da / dt – (da / dx) (dx / dt)

(a(t) – a(t – delta t)) / (delta t) = G M (1/x(t)^2 – 1/(x(t – delta t)^2) / (delta t)

a0 aendramp aavg =

xendramp = integral from 0 to D/c of (a(t) dt^2) = aavg(D/c)^2

aavg = integral from 0 to D/c of (a(t) dt^2) (c^2/D^2) = integral from 0 to D/c of (a(t))

interval | from 0 to D/c ….

m/(m^2/(m/s)^2)
= m/(s^2/1)

a(t) = G M / (D – x(t))^2 a(0) = G M / D

a(D/c) = aendramp = G M / (D – integral from 0 to D/c of (a(t) dt^2))^2

interval | from 0 to D/c …. || for aavg(D/c)^2 > D
aavg(D/c^2) > 1
aavg D > c^2
integral from 0 to D/c of (a(t) D) > c^2
A'(t) = a(t)
A(t) = v(t)
(A(D/c) – A(0)) D > c^2
(v(D/c) – v(0)) D > c^2
v(D/c) D

v'(t) = a(t)
dv/dt = a(t)
dv = a(t) dt

integral from 0 to D/c of (a(t2) dt2) = integral from 0 to D/c of (dv / dt) dt2

integral from 0 to D/c of (dv / dt) dt2 = interval | from 0 to D/c of (v) = D/c

integral

interval [ ] | from 0 to D/c ?<<<^^^

integral of (a(t2)) dt2 / dt2 = (interval [v(t2) / dt2] | from 0 to D/c) lim dt2 → 0 <<<<

left off

4:40 pm:
42

integral from 0 to D/c of a(t2) (dt2 / dt2) D = lim dt2 → 0 of (interval | 0 to D/c of v(t2) / dt2) D > c^2

aavg = integral from 0 to D/c of a(t) dt^2 XX c^2 / D^2

= lim delta t → 0 of (sum from t=0 to D/c of (a(t) delta t) c^2 / D^2)

D = 10XX 4 c = 1 delta t = 1 G M = 2

=> (a(0) + a(D/(c 4)) + a(2 D/(c 4)) + a(3 D/(c 4)) + a(4 D/(c 4))) XX * 1
= GM (1/D^2 + 1/(D – x (D / c 4))^2 + 1/(D – x(....

x(D / c 4) ~ (delta t)^2 * a(0) = G M (delta t)^2 / D^2 = G M / D^2
= 2/16 = 1/8

=> 2 (1/16 + 1/(4 – 1/8)^2 + 1/(D – x (2 D / 4 c))^2 + ….

x(2 D / 4 c) ~ (delta t)^2 * a(D / c 4)
= 1/(4 – 1/8)^2

specific Ep (specific energy of proton? To or particle? To accelerate to light speed, or the energy value given by this calculation^^ to accelerate to light speed in distance from start)

10:26 pm:

(43-)48

Ephoton quantized → f & lambda quantized
→ gamma f & gamma lambda quantized
→ v & gamma v quantized

ty speed limit can be thought of as a shadow that chases after the source at speed c. what then of galaxies receding faster than c that would have their g's lag by 10 c s? What then is the absolute or invarian g's of an object, if v is only relative? (aa41.png 11c=v at t=1 and 11c=v at t=2, and the subsequently increasing lag of a light crest) sizex → sizex gamma as v' → v gamma due to up F' & down F'

size up x = down x = 1 (up x ' + down x ') / 2 = size x ' = 1

up gamma sub x down gamma sub x up gamma sub y down gamma sub y … z z

(delta gamma ')^2 = (((c – v) / c)^2 + ((c + v) / c)^2) / 2 = v^2 + 1

y = ((1-x)^2 + (1+x)^2) / 2 = x^2 + 1

left off

apr 17

8:19 am:
P14 49 – 53

xa' – xb' → xa – xb

~ → gradually
as (after) D → D' = D / gamma

v1 = v0(D) + a0(D)

v1' = v0 gamma1 / gamma0 … = v gamma1 / 1 ….
= v0 gamma1 / gamma0 + a(D) gamma1 / gamma0

a(D / gamma0) => G M gamma0 / D^2

v1' = v0 gamma1 / gamma0 + a0 gamma1^2 / gamma0^2

= v0 gamma1 / gamma0 + a(D / gamma1)

gamma0 = 0

v1' = v1' gamma1 / gamma#-1 gamma1

v#-1' = sqrt(-1) =>

1:19 pm:
54
VV

1:39 pm:
55

54:
$F = K\, q1\, q2 / D^2$ $a = F / M = K\, q1\, q2 / D^2 M \;\; != \;\; K\, q1\, q2 / D^2 q1^2$

$f = mg + qE + qv \times B$
^ cross product

g grav field vec
E electric field vec
B magnetic field vec
v particle velocity of test particle

$a = f / m \;\; = g / m + q E / m + (q/m) v \times B$

Fe- Fe+ Fn0 space

55:
delta $x = ½ a t^2$

5:41 pm:

What if G diff then $F = GMm/D^2$
Or if M or m
$F = K\, q1\, q2 / D^2$
But F(
What if $a = F / q2 = K\, q1 / D^2$
And qp != - qe
And $qp = - qe\, M / m$
And $qn = 0$

6:37 pm:

Maxwell
P push $= K\, q1\, q1 / D^2 M$
E push $= K\, q2\, q2 / D^2 m$

P/E = m/M

Me
P push = K M M / D^2 M = K M / D^2
E push = K m m / D^2 m = k m / D^2
P/E = M/m

qp = - qe m / M

Then
P push = K qp qp / D^2 qp = K qp / D^2
E push = K qe qe / D^2 qe = K qe / D^2
P/E = qp / qe = - qe m / M qe = - m / M

6:58 pm:

Then

F E on P = K qp qe / D^2 qp
= K qe / D^2
= K M / m D^2

qe = - qp M / m D^2

What if

F E on P = K qp qe / D^2 qe = K qp / D^2

Ie

F m on M = G M m / D^2 m = G M / D^2

Then n

F N on E = K qe / D^2
F E on N = K qn / D^2 = 0

Maxwell
F N on E = K qn qe / D^2 qe = 0
F E on N = K qe qn / D^2 qn = 0/0

7:32 pm:

Accel space is grav effect on light ie slowing bending
Charge effect on light only e-

8:07 pm:

E is on opposite side of electric fabric than P
And N just G

8:38 pm:

Electric fab grav fab

Need field vec and mag for both
Which walk
Maybe deviation from vec and mag

9:03 pm:

Cross product of force vec with electric

Need angle around grav vec and mag

9:09 pm:

Or x = n / 1000
Y = (n % 1000) / 100
Z = (n % 100) / 10
W = n % 10

X' / (1+x'^2) = x...

9:19 pm:

N effects grav
Grav effects light
Light effects e
P effects e
E effects light

Grav effects n
N effects p
P effects e
E effects light

9:21 pm:

Light effects e
E effects p little
P effects n
N effects g

9:26 pm:

For n to effect p
N has to have pos
So from.grav Accel n to pos to effect p
Constant relation
To e also

apr 18

[todo add “chase” part antigravity to part where hossenfelder youtube email... where talking about M=-C, where confused about that M=-C should show that >m< would still fall toward M (wrong)]

[todo read Length-contraction-magnetic-force_betwee.pdf downloads]
[is charge density increased at smaller distances due to contraction of volume? Ie does the charge volume stay the same but become compressed in a smaller space... or does the charge compress with the volume?   Think   may 3, 9:51 pm] [https://www.academia.edu/32815401/Length-contraction-magnetic-force_between_arbitrary_currents] [http://pengkuanem.blogspot.ca/2017/05/length-contraction-magnetic-force.html] [http://www.network54.com/Forum/304711/thread/1343902942/5/Why+EM+wave+equation+does+not+conform+to+relativity-] [http://pengkuanem.blogspot.ca/2012/08/why-em-wave-equation-does-not-conform.html] [amplitude decreases with distance, is indicator of strength or distance? And also combining more waves to give higher amplitude?] [Lorentz torque.pdf] [http://pengkuanem.blogspot.ca/2012/03/lorentz-torque-experiment.html?q=2012]

8:28 am:
54 – 58

54-55^^^

54:^^^
[remove:]
$F = K\ q1\ q2 / D^2$ $\qquad$ $a = F / M = K\ q1\ q2 / D^2\ M \neq K\ q1\ q2 / D^2\ q1^2$

$f = mg + qE + qv \times B$
^ cross product

g grav field vec
E electric field vec
B magnetic field vec
v particle velocity of test particle

a = f / m = g / m + q E / m + (q/m) v x B

Fe- Fe+ Fn0 space

55:^^^^ [remove:]
delta x = ½ a t^2

56:

(up gamma + down gamma) / 2 = 1

for v = 0,
((up gamma)^2 + (down gamma)^2) / 2 = 1

otherwise,
((up gamma)^2 + (down gamma)^2) / 2 != 1

| M = x unit hyper-volume
x != 1 Terrence Witt sqrt(-1)

log1 (M) = x

Mroot(x) = 1

like complex numbers ^^^
use in equation to cancel out to solve something, like using i imaginary

aa40.png truck with constant acceleration with inclined plane resulting with stairs inclined and person inclined with helium balloon and weight hanging by hands

acceleration is gravity
NOT gravity is acceleration
helium balloon move →

8:30 am:
59

left off

directional pressure :
grav
: buoyancy

12:10 pm:
60

FE = FG   FEe-   or   FEP+   ?

aE1 = XXX   FE1 / M1 = K q1 q2 / D^2 M1

aep = ae→p

aep + ape = (K/D^2) (qe qp / Me + qe qp / Mp)
= (2 K qe qp / D^2) ((Mp + Me) / Me Mp)

a12 + a21 = (G/D^2) (M1 M2 / M1 + M1 M2 / M2)
= (G M1 M2 / D^2) ((M2 + M1) / M1 M2)

f((Mp + Me) / Me Mp) = 1 / Me   f(...) = ?

f((M2 + M1) / M1 M2) = 1 / M1

b = M1   c = M2   → ^ ←

f(a,b,c) = (a / (b + c)) c   c known   b test particle

E | aab + abc | > C, = 0   V
f(a,b)...

12:58 pm:
61

a12 = ae12 + aG12 =
fE(aE12 + aE21, q1, M1) + fG(aG12 + aG21, M1)
aE12 + aE21 = (2 q1 q2 K / D^2) ((q2 + q1) / M1 M2)

fE(aE32 + aE23, q3, M3) =
2 q3 (q1 q2 K / D^2) ((M2 + M1) / M1 M2) (M2 / (M3 + M2)) =
(2 q123 K / D^2) ((M2^2 + M2 M1) / (M1 M2 M3 + M1 M2^2))   =
(2 q123 K / D^2) ((M2 + M1) / (M1 M3 + M1 M2))

= (2 q123 K / D^2) ((M2 / (M1 M3 + M1 M2)) + 1 / (M3 + M2))
VVV

a) #1 = (2 q123 K / D^2) (M2 / (M1 (M3 + M2)) + 1 / (M3 + M2)) VV
b) #2 = ….. M2^2
a2) #3 = 2 q123 ….

d test particle
c known
dq, dM

fE2(a, d) = K q3 q2 / D^2 M3 a = (2 K q1 q2 / D^2) ((M2 + M1) / M1 M2) dM=M3 dq=q3

left off

1:00 pm:
62

fE2(a,d) = K q3 q1 / D^2 M3

dq dM
= q3 = M3

a = (2 K q1 q2 / D^2) ((M2 + M1) / M1 M2)

fE2(a, d) = (2 K q1 q2 / D^2) ((M2 + M1) / M1 M2) (q3 / 2 q1 M3) (M1 M2 / (M2 + M1))
q3 = 1, -1 M3 = -1? q3 = -1, 1?
= (a dq / 2 q1 dM) (M1 M2 / (M2 + M1)) = a K2 dq / dM

K2 = M1 M2 / (M2 + M1) q1 2 a : K2 =
a * K2 = (2 K q1 q2 / D^2) ((M2 + M1) / M1 M2) (1 / 2 q1) (M1 M2 / (M2 + M1))
= K q2 / D^2

Invariant? → ^^^
f(), a != accel space
f(),a = force space

f() dq / dM = acceleration

fE3(e, d) = e dq / dM e = a K2

aG * G2 = (G M1 M2 / D^2) ((M2 + M1) / M1 M2) ….

1:25 pm:
63 – 66

aG12 + aG21 = G(M1 + M2) / D^2
fG2(a,d) = G M2 / D^2
fG2(aG,d) = fG2(aG G2)
= fG2(eG) = G M2 / D^2

aG = (G M1 M2 / D^2) * (M2 + M1) / (M1 M2)
= G (M2 + M1) / D^2
d = M3
aG G2 = eG

(a,b,c,d,e are just temporary labels not referring to the usual default meanings)

aE12 + aE21 = (2 K q1 q2 / D^2) * (M2 + M1) / (M1 M2)

not linear
or quadratic to:
thus, E stronger at
lower D, etc. (than G.)

(aE12 + aE21) : (aG12 + aG21)
= (2 K / G) * q1 q2 * (1 / M1 M2)

= aE / aG

aG / aE = (G / 2K) * (1 / q1 q2) * M1 M2

fE4(aG, d) = || (vector sign above →)aG || (2 K / G) (q3 q2 / 1) (1 / M1 M3) ((vector sign above →) aE / ||aE||) (M2 D12^2 / 2 q1)
dq = q3   dM = M3
d is a particle, with dq charge and dM mass
= K q3 q2 / D32^2 M3

E does own walk and samples aG there?
But fE(net aG) != sum(f(aG))

1:38 pm:
67

VV

2:10 pm:
68

VV

2:21 pm:
69 – 70

fE4(sigma aG) = sigma fE4(aG) ?

fE4(aG12 + aG14, d) = fE4(aG12, d) + fE4(aG14, d)

fE4((G / D12^2) * (M1 + M2) + (G / D14^2) * (M1 + M4)) ?=
fE4((G/D12^2)*(M1 + M2)) + fE4((G/D14^2)*(M1 + M4))

if don't know D12, → don't know M2 from aG12 + aG21, → can;t get aE32

aG = G M2 / D^2 aE = K q1 q2 / D^2 M1
a = C M2 / D^2 or C 1 / D^2 M1

FabG = Fab with trace G particle,
no backreaction for
G part(icle?) or effect of it on Fab.
No mass for G particle required.
M2 taken from Fab part(icle?)s.
(We know all M2 attractions.)

FabE = M1, q taken from Fab parts.
= K q1 / D^2 M1

OR C M2 or C / M1 (for above equations for aG and aE)

2:38 pm:

FG = G M1 M2 / D^2
FE = K q1 q2 / D^2

Ag = G M2 / D^2. M2 (toward) known fab
Ae = K q1 q2 / D^2 M1. M1 q1 (from) known

Aesub = K q1 / D^2 M1

Therefore FabG is the sum of the field of vectors of acceleration from a point of part 1

And FabE is answering question what is the
Aesub = Accel to part 2 given by

Can simply qM1 = q1 M1
Neg mass same effect as neg charge

2:41 pm:

Accel g depends on mass toward

Accel e depends on mass from

So aesub = net Accel of surrounding parts to here

2:56 pm:

Given two protons of charge q2
Aesub FabE gives repulsion of like charged particles from points
Ag gives ready Accel
Aesub gives Accel of others and must be manipulated with q1/M1

So how get ae from aesub

Ae = K q3 q2 / D^2 M3. Ae Of part 3 to 2
Aesub = K q2 / D^2 m2   of part 3 to 2

Q2 M2 unknown

F(aesub) = ae
F = ?

3:59 pm:
71 – 75

ae = K q3 q2 / D^2 M3   P3 → P2   P3
aesub = K q1 / D^2 M1   P1 → P2   P1 = from particle

aesub FabE is attractionXX repulsion of points P2 ifXX cXX against charge q1 (if q3 = q1,
or q2 = q1)

if using Y factor for FabE, ie... (aa29.png concentric cirlces P) (aa30.png stacked increasing sheets)
← ← bigger, more area surfel at lower force out (point to outer circle and greater sheet at top)
Gives (point to resulting sheets from concetric circles of fields above)

(aa31.png stacked sheets increasing with P from bottom going to up and side along sheets with arrow to P4)   Like-charge another P4 goes   ie the P4 particle is moving away from the P like-charge into more-space, lower charge X factor area (acceleration, charge), with greater Y factor or sheet area

if using X factor,
Then → (aa32.png concentric circles P with numbers 1,2,3 from in-out)
Gives → (aa33.png stacked sheets with smaller sheets at bottom now, number 1,2,3 bottom-to-top, with P at the bottom, where P is in the center at the above diagram)
Like-charge another P4 goes (aa34.png stacked sheets with increasing size down and area from bottom

slightly on the side, to up and toward the middle arrow showing P4 at the top going away from P at the bottom)

Magnitude: f(aesub) = ae   f = ? $q / M = - q / - M$ $- q / M = q / - M$
$f(K q1 / D^2 M1) = K q3 q2 / D^2 M3$

use, decode
P3: use live part(icle?)
walk P1: from fab part(icle?)
walk P2: to fab part(icle?)

Given:
from: → (vec sign above) aesub
FabE:
direction away from here of like-charge q1

Is there difference between K q1 and KXX   K2 = K q1 ?
FabE vec =
lower area neib = dir of repulse

If following toward lower area neighbours (using Y factor) for non-like charge q2 != q1,
can just use q2 = q1,
for $K > 0$
(where $FE = K q1 q2 / D^2 < 0$ for $q1 = -q2$)
(and $ae < 0$ is attraction)
(and $aesub < 0$)

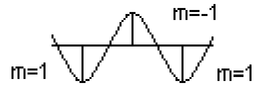
(q2 / M3) sum (aesub) = ae   ← invariant (sum part)
what is negative area? Representable by connections (ie twisting signed cross products, or arrows edit<<)

Have negative area, so need sides (ie sidedness, with a difference between front and back) for surf-els, not like following perpendicular to gravity vector?

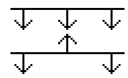
$X = 1 / Y = aesub$
$Y = -1 = s^2$ $s = sqrt(-1)$

5:26 pm:
76 – 81, no 79, no 80

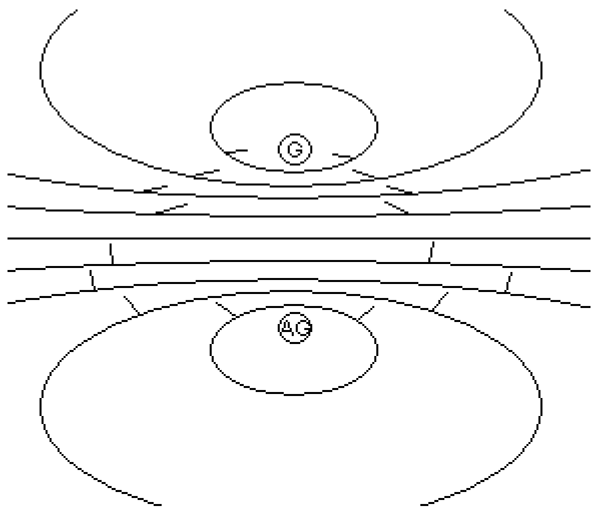
$X = 1/Y = aesub = -1 = -1/Y$?   (aa22.png wave)



Y = -1 = s^2   s = sqrt(-1)   (aa21.png arrows of fabric to indicate signedness of area)

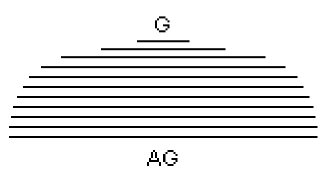


aa20.png G-AG arrows of fabric with equal charges

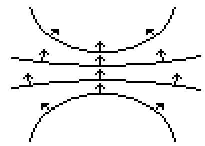


^^make lines shorter, smaller frame, all   or make gridded dotted with one side crochet

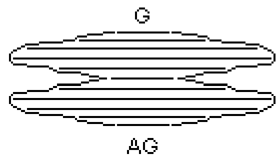
aa24.png G-AG arrows resulting manifolds with segments greater sheets at bottom AG



Y' = 1 / (1 + X)   X <= -1 ?
1 / (1 + |X|) & (aa23.png resulting or sampling sheets with slight bend and arrows pointing up only with bulge in center)

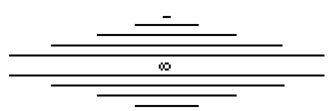


(aa25.png resulting fabrics manifolds with dip in center and bulge at either side decreasing to dip at ends, with G AG top to bottom)

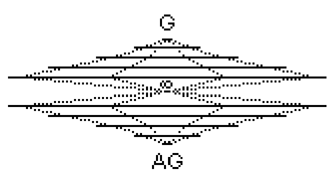


for $1/Y = |X|$ ← wrong! Infinity (aa26.png sheets resulting with bulge in center no names)

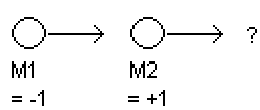
∞



(aa27.png G to AG resulting sheets without scale +1 to X to get Y) $1/Y = X$ $Y \rightarrow$ infinite as $X \rightarrow 0$



AG = FG / M1 M1 < 0 M2 > 0 AG > 0 ??
= G M1 M2 / D^2 M1 AG12 > 0 ? ??
(aa28.png chasing of M1=-1 after M2=+1) ?



No such thing as max whitehole... like r=0 (ie... there will be infinite repulsion at r=0, no limit) …. particle or blackhole Where $Y = 1 / X \rightarrow$ infinity as $X \rightarrow$ infinity (if X or accel $\rightarrow$ infinity …. if in white hole $1 / X \rightarrow$ infinity if acceleration decreases to 0... because... it is negative acceleration..... if we scaled the maximum attraction as $Y = 1 / X \rightarrow 0$ as $X \rightarrow$ infinity and scale the $Y = 1 / X \rightarrow$ infinity of white hole of maximum repulsion, such that.... X max attraction $\rightarrow$ infinity and X max repulsion = X white hole – X max white hole repulsion $\rightarrow$ 0... VVVV end) ie $Y = 1 / (KA + X)$ where $X + KA > 0$

wrongX right!X wrong : $X = AE = K\ q1\ q2 / D^2\ M1 \rightarrow$ infinity for $D \rightarrow 0$

Xmin $\rightarrow$ - infinity Xmin + KA $\rightarrow 0$

Xmin < 0

^^^ $G\ M1\ M2 / D^2\ M1 = G\ M2 / D^2 = AG$ $M2 < 0$ AG $\rightarrow$ - infinity $D \rightarrow 0$

$AE = FE / M1$ $q1 > 0$ $q2 > 0$ $AG < 0$

$= - K\ q1\ q2 / M1$ $AE12 < 0$ $M1 > 0$

[edit: possible to make anti-G a maximum sheet size, and G sheet $\rightarrow 0$ for G $\rightarrow$ infinity at r = 0? as G $\rightarrow$ - infinity X $\rightarrow$ - infinity make to X $\rightarrow$ 1 / YAGmax $\rightarrow$ G sheet max? Or $1 / (X + K) \rightarrow$ max AG sheet size for X $\rightarrow$ - infinity and in no case X+K = 0 ? VVVVVend]

79:

VVV

80:VVV

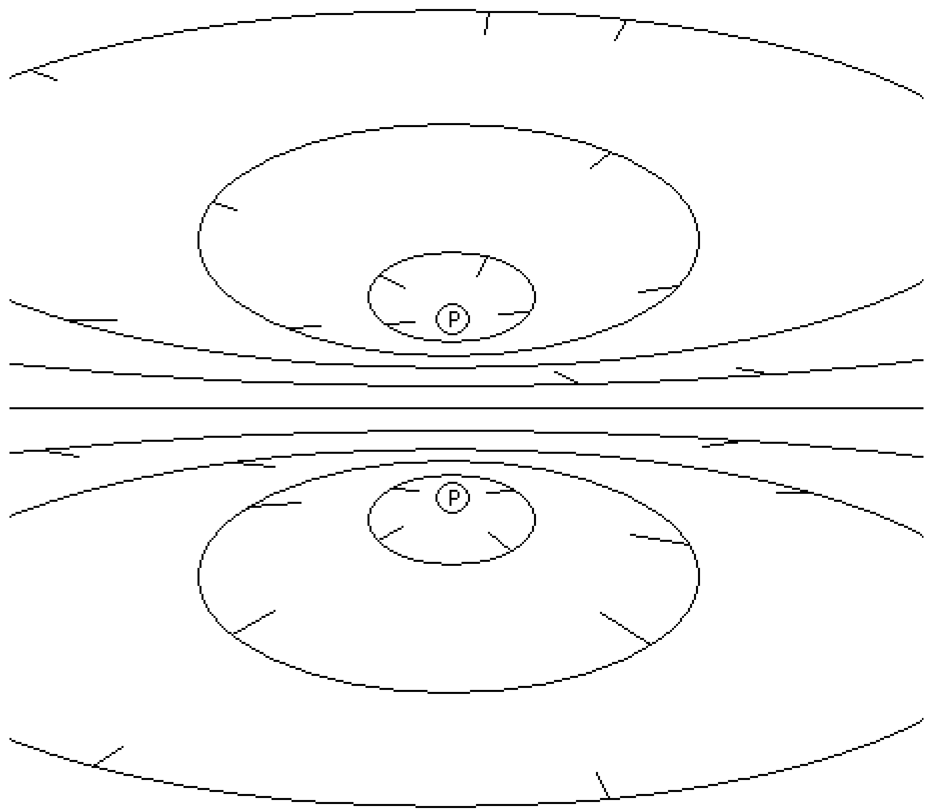
left off

5:35 pm:

79,80, 82 - 84

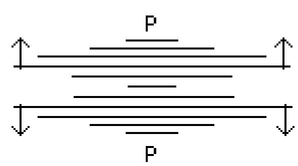
79:

aa15.png



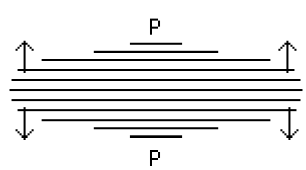
P-P opposite arrows equal charge ^^

aa16.png



P-P stacked plates straight with two arrows each opposite, equal charge^^
with dip in middle

aa17.png

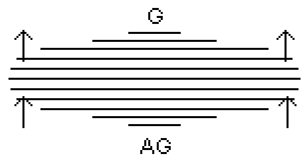


P-P stacked plates straight with two arrows each opposite, equal charge^^
no dip in middle

G = 1
G = ¼

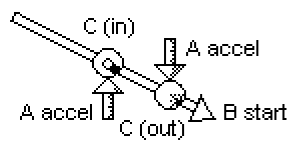
G = 0
G = -¼
G = -1

aa18.png



G-AG stacked plates straight with arrows in one direction (only 2 total), with an increase in the center no dip, and a cross (wrong)...^^^

aa19.png



cross product signed diagram 3d, with arrow into and out of page, and diagonal line, with points and arrows to show A accel, possibly an opposite accel in the left, and a diagonal arrow down right of the B start sample walk direction of line of points^^ result is C, in/out arrow, of cross(A,B)

if follow C walk vec = A accel vec X B start vec

What is G < 0-- or just area++

80:

Between two same or opposite charges,
in the middle will always give magnitude 0
For G+, always toward lower area of forward arrows
For G-, always toward lower area of forward (edit:???)
For E+ (edit: ^^^ ie.. G+ or G- is for the test particle?)
For E+ proton, toward lower area of (-1 charge)
against arrows, and magnitude fE4(aesub, dq, dM) = ae
(depends also on mass)
For E- electron toward lower area of (+1 charge)
forward arrows
(If E arrows point toward E+ proton charge that is)

81:

Refering to 77/76?:

Doesn't make sense for dark matter to stay hglo(?) clumps (: doesn't make sense for dark matter to clump together because they repel each other, but also doesn't make sense for them to stay separate from ordinary matter in halos somewhat because they are attracted to ordinary matter)

82:

G+G- follow same path,
E+E- opposite paths from FabE,
G+G+ effect opposite to G+G-, but also not E+E+

G+G+ same as E+E-
G+G- different from E+E+, E+E-, and G+G+ and G-G-.

G-G- differ from all also
E+E+, E+E-, G+G+, and G+G-

5:38 pm:
85

or P+, e-
wrong: in the middle between AG,G forces add up,
even though some fading due to distances from sources

5:46 pm:
86-88

For E: opposites attract
same repel

For G: same attract or repel (G-, G+)
and opposites chase

E also have third option:
charge 0 neutron, maybe four cases:
E+E0, E-E0

So follow arrows, not just lower area neighbour

6:22 pm:
89 – 90

aesub = aG

K q1 / D^2 M1 = G M2 / D^2 ?

f(K q1 / D^2 M1)   K q3 q12 / D^2 M3

aesub = K q1 / D^2

K q1 / D^2 = G M2 / D^2 ?

Charge space → K q2 / D^2 = G M2 / D^2 ?

K q1 / D^2 M1   ← of P1 accel, part of likelihood to accel away distance D of sample pt. (edit: D is not distance away but distance used in calculating the magnitude value)
K q1 (qs) / D^2 M1   ← accel toward sample point with charge qs (net) (and dist D) of unknown now particle P1

So sum of all particle's to accel to here
So instead of G like dropping a particle into
FabG and being given accel vec, magnitude,
for E, dropping particle into FabE,
given charge, must anyway (sum check?) all space-timeto get find point of most attraction,
but that applies to all parts together

...no just for P1 needed

6:42 pm:
91

Useless, like dividing by M2 for G
G / D^2 M2 maybe extract
but for E don't need M2 anyway
(can only use sample particle's M as M1 given equations laws).
Why do we need backward accel? Probably to attract?

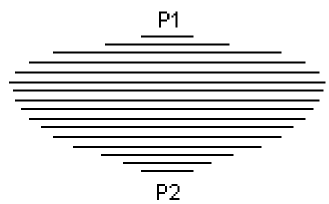
6:42 pm:
92

M1 = 2

$M_2 = 1$
$q_1 = 1$
$q_2 = 1$

$K q_1 / D^2 M_1 < K q_2 / D^2 M_2$
$Y_1 > Y_2$

aa14.png



XXXX^ incorrect curvature drawing...?

Useless if accel equal midway regardless of M1, M2 etc.

7:00 pm:
93 (“73”)

Inverse curvature:

G accel is curvature of space by M
E is curvature by charge of curvature XbyX felt by M....
by inverse M?

A12G ~ M2 A12E ~ 1/M1 Inside-out curvature

G's curvature is felt the same by part's, but the fabric differs by M
E's curvature is felt by M (and q) of particle but the fabric is
With only 3 particles, 2 M's, 3 q's, not much difference unless macro-scale where objects vary widely by mass and radius (ie E curvature doesn't really apply well to macro-scale like G does because E... well E is better for micro/nano-scale because there are only 2 masses (for neutrons, protons, and electrons) probablly.. and 3 charges where 2 have the same but opposite value and 1 is 0, simply, and because there are only 3 particles if the classical model is correct... so these E curvatures so far are simplified by those, and so are G curvatures, at the nano-scale^^^)
(G curvature:) “I don't care what my mass M, is, positive or negative, etc.” Felt same = same accel (though sign might differ) One fabric
(E curvature:) care: my mass, my charge, their charge Generated same = X&X ______
Reaction same “Reaction fabric” Useless

7:12 pm:

94-95 (“74”-”75”)

What P AG = AE and vec? P-space
Vp = VG x VE
C = Vp x B
useless
how recover q, M, VG, vE (vG, vE?)
(what constant P can relate those, or rather a variable P that will be used to construct the manifolds as the magnitude, with a possible Vp = VG x VE as the resulting walk vector, or rather the magnitude's vector, to which the walk vector is calculated^^)

8:05 pm:
96 (“76”)

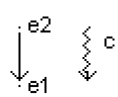
G effect curve on light = refraction, speed, black hole

E effect curve on light = t? Absorbtion, emission

8:42 pm:
97

E = h f

aa11.png



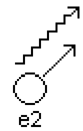
two electrons^^

f++
lam--

released in packets, absorbed all?
Seems opposite

not...

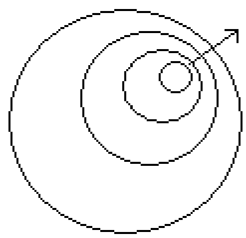
aa12.png



electron e2 and photon going up right together^^

but...

aa13c.png



waves movement stacked^^

$E \rightarrow 0$ (or $E \rightarrow -K$) for negative electron affinity

left off

9:09 pm:

G force varies by masses
G Accel constant

E force constant
E Accel varies by masses and charges

10:18 pm:
98 – 99

Gaccel const Ga = G M2 / D^2
Gforce dependent on M1 GF = G M2 M1 / D^2

Eaccel dependent on M1, q1 $E_a = K\ q1\ q2 / D^2\ M1$
Eforce const $EF = K\ qT\ q2 / D^2$

EF / M1 = P Ga

10:20 pm:
100

EF / M1 = P + Ga

10:42 pm:
101 – 102

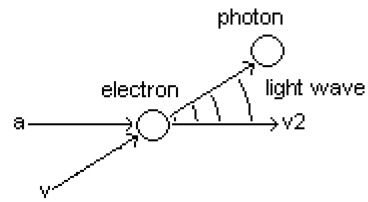
f = frequency of incident photon
max kinetic energy of ejected electron: $K_{max} = h f - \varphi$ where $\varphi = W$ = work function minimum energy to remove delocalized electron from surface of metal
$\varphi = h f0$
f0 = threshold frequency for the metal
thus,
$K_{max} = h (f - f0)$
Must $E_k > 0$ so $f > f0$ for photoelectric effect (for photon to be absorbed and to eject the electron)

Ee(lectron?) = $h (f - f0) = ½$ Me(lectron?) v^2 electron kinetic energy absorbtion $f > f0$

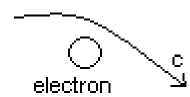
apr 19

1:43 pm:
103

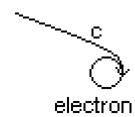
j.png



j2.png



j3.png



refraction gravitational/electric lensing

Ephoton = h f = delta ½ M vx^2

4:26 pm:
Draw warped space of objects of projected to straight line geodesic of particle or object
Perspective

apr 20

1:27 pm   may 3:VVVV
[Edit
For wave collapse
Add
Wave expansion simulated by tri mesh sphere
When expanding and a sphere tri gets too big, split it into three, with center vertex moved forward by amount that would be expected ahead if it was there from beginning
And when refracting
Curve points expansion direction heading to refracted angle from initial angle etc]

10:43 am:

Light wave pulse segment absorbed relating to wavelength and scale by distance from emitter

10:46 am:

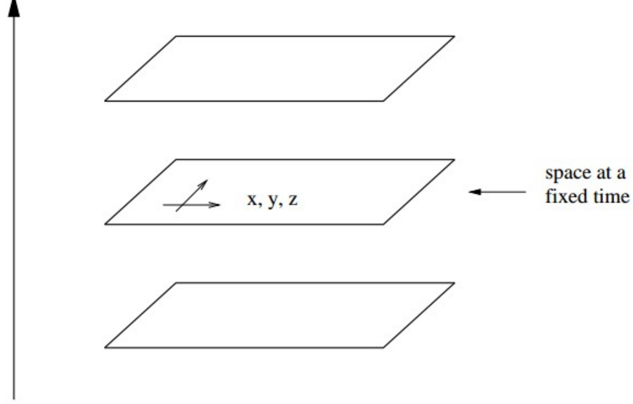
Or photons with radius of wavelength
Which depends on relative motion of emitter to receive at receive, send time and

12:47 pm:

Distorted render based on velocity

Gamma ¥ xyz +-

Screenshot_20170420-124632.png
Screenshot_20170420-124640.png
Screenshot_20170420-124624.png



Consider a garden-variety 2-dimensional plane. It is typically convenient to label the points on such a plane by introducing coordinates, for example by defining orthogonal x and y axes and projecting each point onto these axes in the usual way. However, it is clear that most of the interesting geometrical facts about the plane are independent of our choice of coordinates. As a simple example, we can consider the distance between two points, given

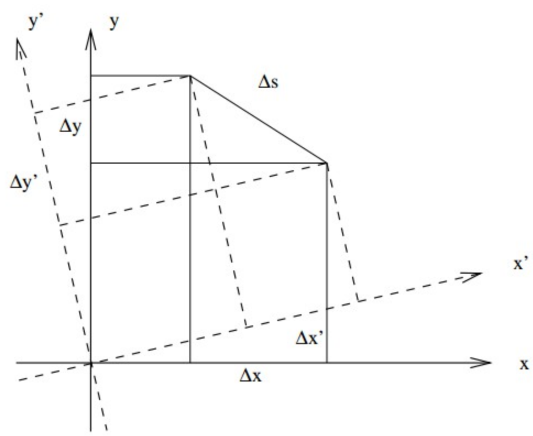
by

$$s^2 = (\Delta x)^2 + (\Delta y)^2 \ . \tag{1.1}$$

In a different Cartesian coordinate system, defined by x' and y' axes which are rotated with respect to the originals, the formula for the distance is unaltered:

$$s^2 = (\Delta x')^2 + (\Delta y')^2 \ . \tag{1.2}$$

We therefore say that the distance is invariant under such changes of coordinates.

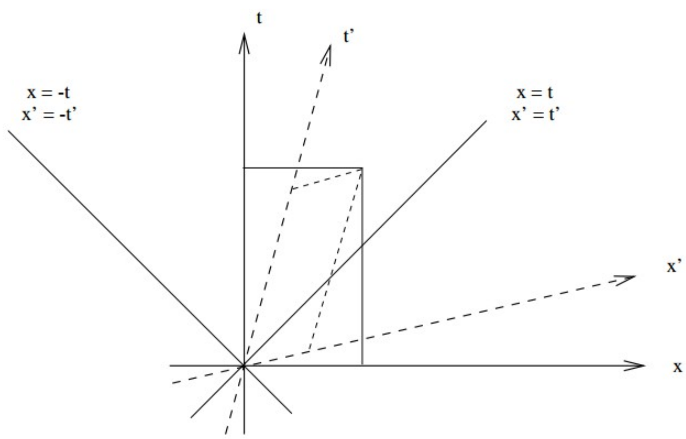


This is why it is useful to think of the plane as 2-dimensional: although we use two distinct numbers to label each point, the numbers are not the essence of the geometry, since we can rotate axes into each other while leaving distances and so forth unchanged. In Newtonian physics this is not the case with space and time; there is no useful notion of rotating space and time into each other. Rather, the notion of "all of space at a single moment in time" has a meaning independent of coordinates.

Such is not the case in SR. Let us consider coordinates (t, x, y, z) on spacetime, set up in the following way. The spatial coordinates (x, y, z) comprise a standard Cartesian system, constructed for example by welding together rigid rods which meet at right angles. The rods must be moving freely, unaccelerated. The time coordinate is defined by a set of clocks which are not moving with respect to the spatial coordinates. (Since this is a thought experiment, we imagine that the rods are infinitely long and there is one clock at every point in space.) The clocks are synchronized in the following sense: if you travel from one point in space to any other in a straight line at constant speed, the time difference between the clocks at the

conventionally thought of as) right angles, and suppressing the y and z axes. Then according to (1.19), under a boost in the x-t plane the x' axis ($t' = 0$) is given by $t = x \tanh\phi$, while the t' axis ($x' = 0$) is given by $t = x/\tanh\phi$. We therefore see that the space and time axes are rotated into each other, although they scissor together instead of remaining orthogonal in the traditional Euclidean sense. (As we shall see, the axes do in fact remain orthogonal in the Lorentzian sense.) This should come as no surprise, since if spacetime behaved just like a four-dimensional version of space the world would be a very different place.

It is also enlightening to consider the paths corresponding to travel at the speed $c = 1$. These are given in the original coordinate system by $x = \pm t$. In the new system, a moment's thought reveals that the paths defined by $x' = \pm t'$ are precisely the same as those defined by $x = \pm t$; these trajectories are left invariant under Lorentz transformations. Of course we know that light travels at this speed; we have therefore found that the speed of light is the same in any inertial frame. A set of points which are all connected to a single event by



straight lines moving at the speed of light is called a **light cone**; this entire set is invariant under Lorentz transformations. Light cones are naturally divided into future and past; the set of all points inside the future and past light cones of a point p are called **timelike separated** from p, while those outside the light cones are **spacelike separated** and those on the cones are **lightlike** or **null separated** from p. Referring back to (1.3), we see that the interval between timelike separated points is negative, between spacelike separated points is positive, and between null separated points is zero. (The interval is defined to be s^2, not the square root of this quantity.) Notice the distinction between this situation and that in the Newtonian world; here, it is impossible to say (in a coordinate-independent way) whether a point that is spacelike separated from p is in the future of p, the past of p, or "at the same time".

To probe the structure of Minkowski space in more detail, it is necessary to introduce the concepts of vectors and tensors. We will start with vectors, which should be familiar. Of course, in spacetime vectors are four-dimensional, and are often referred to as **four-vectors**. This turns out to make quite a bit of difference; for example, there is no such thing as a cross product between two four-vectors.

Beyond the simple fact of dimensionality, the most important thing to emphasize is that each vector is located at a given point in spacetime. You may be used to thinking of vectors as stretching from one point to another in space, and even of "free" vectors which you can slide carelessly from point to point. These are not useful concepts in relativity. Rather, to each point p in spacetime we associate the set of all possible vectors located at that point; this set is known as the **tangent space** at p, or T_p. The name is inspired by thinking of the set of vectors attached to a point on a simple curved two-dimensional space as comprising a

Lecture Notes on General Relativity

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Abstract

These notes represent approximately one semester's worth of lectures on introductory general relativity for beginning graduate students in physics. Topics include manifolds, Riemannian geometry, Einstein's equations, and three applications: gravitational radiation, black holes, and cosmology. Individual chapters, and potentially updated versions, can be found at http://itp.ucsb.edu/~carroll/notes/.

NSF-ITP/97-147 gr-qc/9712019

Table of Contents

12:48 pm:

Or based on escape velocity electric grav

1:40 pm:

First distort is x y with some angle velocity and length contraction with still still observer

Second is different times and positions with same v advanced by interval t and

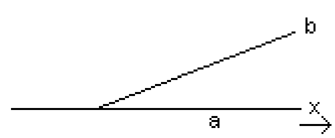
Even thought the line in the minkowski diagram shows velocity , if they were points at equal intervals of time in their perspective they would show less or more spaced out dots even though the dots of t are equally placed vertically to a still observer observing

5:31 pm:

103 – 107

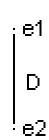
vb → gamma b → t'b =

aa6.png

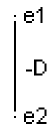


j4.png XXXX

aa2.png

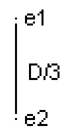


aa3.png



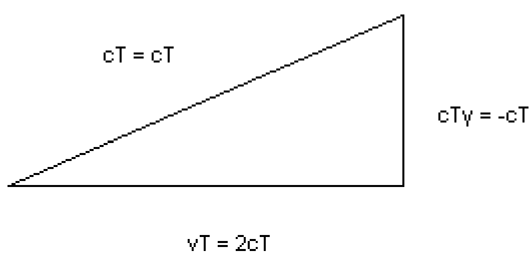
gamma = (c – 2c) / c = -1
D' = D / gamma = -D
^^^

aa4.png

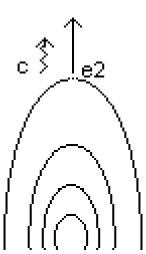


gamma = (c + 2c) / c = 3
D' = D / gamma = D / 3
^^^^

aa7.png

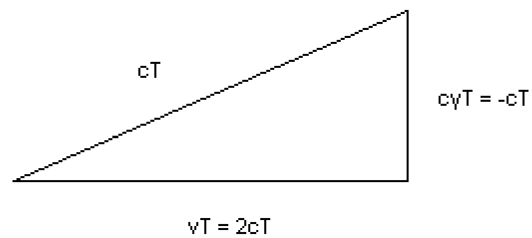


aa8a.png

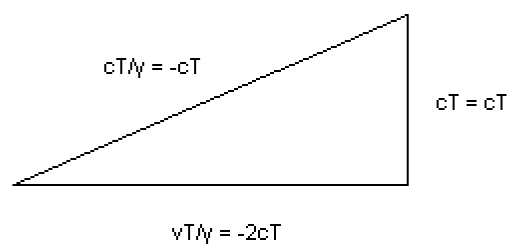


For e1 perp(endicular?), light goes back (or slower?), and e2 is actually in front

aa9.png



aa10.png



$x' = x + v \gamma t$? $x' = \gamma (x - v t)$ $\gamma = \text{sqrt}(1 - v^2 / c^2)$

$t' = t / \text{sqrt}(1 - v^2 / c^2)$ $c^2 (t2 - t1)^2 - (x2 - x1)^2 = 0$

$c^2 (\text{delta } t)^2 - (\text{delta } x)^2 = 0$

$t' = \gamma (t - v x / c^2)$ $c^2 t'^2 - x'^2 = c^2 t^2 - x^2$

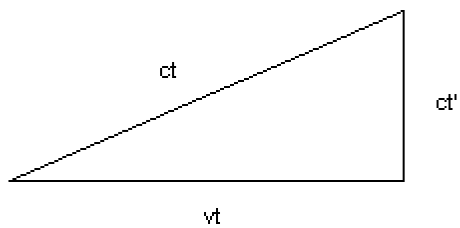
$= (t - v x / c^2) / \text{sqrt}(1 - v^2 / c^2)$ $t' = \text{sqrt}(t^2 - x^2 / c^2 + x'^2 / c^2)$

9:29 pm:

108

t' = gamma (t – v x / c^2)
= (t – vx / c^2) / sqrt(1 – v^2 / c^2)

t' = sqrt(t^2 – x^2 / c^2 – x'^2 / c^2)
x' = gamma (x – v t)



- cos(ct,vt) ct vt + (ct)^2 + (vt)^2
= (ct')^2

t' = sqrt((- cos(ct,vt) ct vt + (ct)^2 + (vt)^2) / c^2)

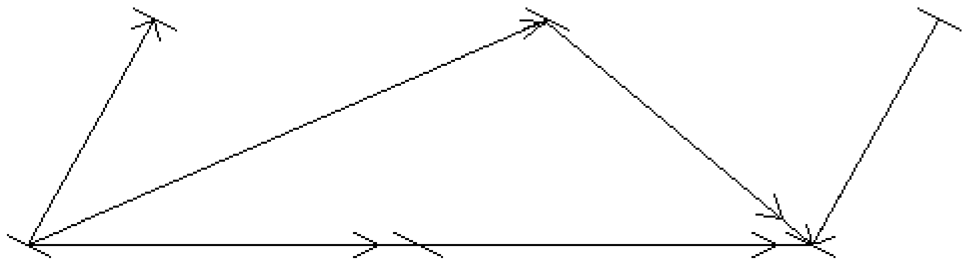
x = vt   x' = 0

gamma^2 = (1 / sqrt(1 – v^2 / c^2)) = 1 / (1 - Beta^2)

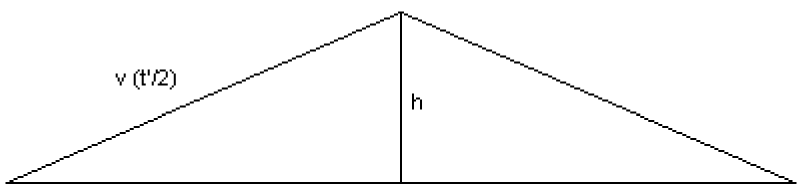
x' XXX =   x = x0 – vt   x = curly l little ℓ
x' = gamma (x0 – vt) ? | Gamma x0 → D / gamma
x = gamma (x0' + vt') ? | x = gamma (x0' – v't) ?
| x = (1/gamma) (x0' – vt') ?

Gamma = (c – 0.2c)/c =0.8   x0 = 1 c s
v = 0.2 c   t = 1 s
v' = 0.2 c gamma = 0.16 c   x0' = 0.8 c s
x = 0.8 (0.8 c s + 0.16 c * 1 s) = 0.8 * 0.96 c s
= 0.768

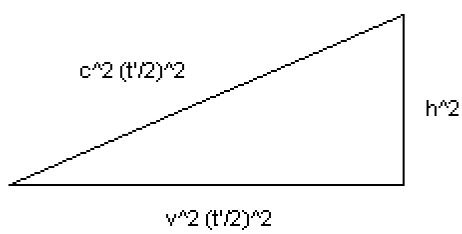
i2b.png



i2c.png



i2d.png



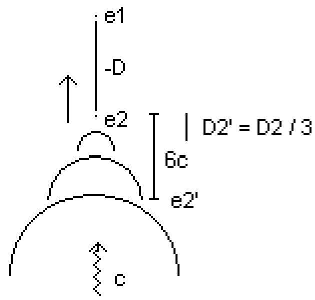
t' = 2h / sqrt(c^2 - v^2)

10:01 pm:

109

2 c * 3 = 6 c

aa.png

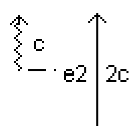


c / t' – v / t' = c (t' = gamma = t'/t for t = 1)

down Drecv = - up v * down gamma = - 2 c * 3 * 1 s
= -6 c s

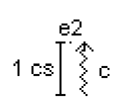
f lam = c z = 0
lam
up Drecv = up v * up gamma * t
= 2 c * -1 * s = -2 c s

t = 0
ab.png



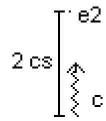
xc = 0 xcr(elative?) = 2cs

t = 1
xc = -1 c s
xcr = 1 c s
ac.png



t = 2
xc = -2 cs
xcr = 0 c s

ad.png



10:39 pm:

110
...

apr 21

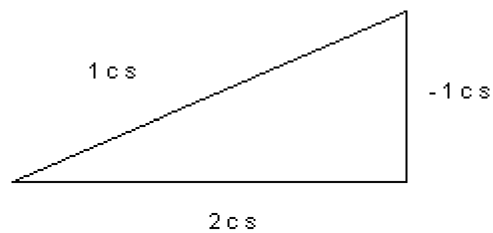
7:08 am:
110 – 111

- cos(0) 2 vt ct + (vt)^2 + (ct)^2 = (ct')^2

c^2 t'^2 = -2 v c t^2 + v^2 t^2 + c^2 t^2
t'^2 / t^2 = -2 v / c + v^2 / c^2 + 1
t' / t = sqrt(-2 v / c + v^2 / c^2 + 1)

v = 2c	gamma = sqrt(- 4 c / c + 4 + 1) = 1
v = 3c	gamma = sqrt(- 6 + 9 + 1) = 2
v = 0.5c	gamma = sqrt(- 1 + 0.25 + 1) = 0.5

i2.png



v' / v = t' / t = (c – v) / c ?

(1 – 0.2) / 1 = 0.8

sqrt(- 2 v / c + v^2 / c^2 + 1) ^ 2 = ((c – v) / c)^2
- 2 v / c + v^2 / c^2 + 1 = c^2 / c^2 – 2 c v / c^2 + v^2 / c^2
= 1 – 2 v / c + v^2 / c^2

vescape of (e) from (P) at r
F = K qe qP / D^2
m vesc^2 / 2 = G M m / D (½ m v ^ 2 = EK = F(G,M,D) /m? * D = EG → vesc E eq.)
vesc^2 = 2 K qe qP / D m (if we rather don't have the m... above... but here definitely need to /m)
because m vesc^2 / 2 = K qe qP / D therefore....
qesc? Up gamma = (c – vesc) / c = (c – sqrt(2 K qe qP / D m) / c
vesc < 0 for down gamma needs
rather... opposite of up.. because down is not escape... so vesc would -vesc for down gamma

qe = qP
vesc = sqrt(- K) = ?

vesc^2 = G M / D
vesc = sqrt(G M / D)
M = -1
vesc = sqrt(- 1) = ?

TEinitial = TEinfinityataway
KEinitial + PEinitial = 0
m vesc^2 / 2 – G M m / Rinitial (correct: a = G M F = G M m / D^2 E = G M m / D)

TEinf = KEinf + PEinf
TEinf = 0 + 0
KEinf = m vinf^2 / 2 vinf = 0
KEinf = 0 PEinf = - G M m / Rinf = 0

for M < 0 PEr = G M m / r ? venter to r ?

for M < 0   vesc = - venter ?   From inf ?   XXX

v' = 11c
v' / v = (c – v)/c
11c/v = (c – v)/c

v' = v gamma →   v' = 11 c gamma < 11c   →   v' = 11c   v = ? gamma = ?

v' = effective v   from POV of still (e1)

11c = c v – v^2 = v (c – v)   XXX v = sqrt((c – 44c) / c) ///XXX
0 = - v^2 + c v – 11 c   a x^2 + b x + c = 0   x = (- b +/- sqrt(b^2 – 4 a c)) / 2 a
0 = v^2 – c v – 11 c   a = 1   b = -c   c = - 11 c   v = (c +/- sqrt(c^2 + 44 c)) / 2
v = (1 +/- sqrt(1 + 44)) / 2 = 0.5 +/- 3.3541

8:23 am:

Drecv = (-vT)
Ceffective =

Gravitational dilation length contraction explain black hole

8:33 am:

As grav increases net or radius decreases leading to net grav increase
Contraction of D away from net grav is D/¥

8:49 am:

When vescape = c
(C-v)/c = 0
Does d to grav source or away decrease to 0?
If to grav source then Accel becomes infinite and collapse happens to black hole
If away then away becomes infinite and toward becomes D/2

9:10 am:
112

10:52 am:
112 - +

12:48 pm:
113 – 116

v = 11c
gamma = -10
up v' = -110c

x' = gamma (x0 – v t)
x(lam, x0', v' t) = ?

up v = -110c
up gamma = 111 / -10 = - 11.1
up v' =
? = - 109 / -10 = 10.9

x = 0
v = 0
gamma = 1
D = 10
a = 1/10^2 = 0.01
v' = (0.01) 1/1 = 0.01

x = 0.01
v = 0.01
gamma = 0.99
D = 9.99
a = 1 / 9.99^2 =

try with dt->0 and var a
(approaching light speed and getting resulting x, v, a, lam, x'... and exceeding light speed and seeing if can continue that way... and if will outpace light)

1:03 pm:
117

117 - 122

[...table]
x = 1.294
v = -1.406
a = 0.6
v' = -0.806 2.406 / -0.38
[table]

$x = x0 + v0 ((c - v0) / c)\, t + G M \qquad / (D-x)^2$

~~~~~

lam = $(c-v)/c$ =

v = integral 0 to t of $G M / d(t)^2$

~~~~~

$x = \frac{1}{2} a t^2$!= ^ $\quad$ x = sum i=0 to t c1 of a (i / c1) (di / c1)^2 = sum i=0 to t c2 of a (i / c2) (di / c2)^2

$(1 + 2 \sqrt{-1})^2 = 1^2 + 4 \sqrt{-1} - 1$

D = Cmplx $\rightarrow$ All D = Cmplx

up lam = -1 $\rightarrow$ D & $t < 0$

$c^2 t^2 - x^2 = 0$

$t < 0$, x = Cmplx

no need

Cmplx for $t < 0$

if cos(Cmplx1) = Cmplx2 then can

use 2-vector (Cmplx1) as scalar?

ℂ Cmplx

$t / T = (c-v)/c$

= Cmplx = ?

$- 2 \cos(cT,vT)\, cT\, vT + (cT)^2 + (vT)^2 = (ct)^2$

2 + 2 sqrt(-1) + 2 4rt(-1) + 2 8rt(-1) …. $\qquad$ 2 6rt(-1) ?

x $\quad$ y $\qquad\qquad$ z $\qquad\qquad$ t

for v1 ~ v2 $\qquad$ D12' ~ D21' $\quad$ but

delta up D12' $\quad$ <> delta up D21' $\qquad$ & $\qquad$ delta D12' >< delta D21'

“as co-moving electrons or particles continue co-accelerating, their effective distance changes due to dilation but they re-establish their previous distance in the transformed space gradually. Even though the effective center of mass of an electron or particle is offset due to dilation due to direction, in regards to how it feels the forces of other particles, the effect on other particles remains from the center.”

maybe if... VVVV

maybe if... lam ahead 0.5 and behind 1.5.... how is lambda translated into distance... for other particle^^^^^ VVVVV

$t' (\text{up } D12) = t (\text{up } D12') \neq t' (\text{down } D12) = t (\text{down } D12')$
time to traverse D for up D12 = down D12

apr 22

Can apparent superluminal neutrino speeds be explained as a quantum weak measurement?
M V Berry et al 2011 J. Phys. A: Math. Theor. 44 492001

https://youtu.be/RbYEppod_Fo?t=7m15s

$F = G\, M1\, M2 / D^2$
$A = G\, M2 / D^2 > 0$ for $M1>0,<0$
M1 with $M1<0$ will CHASE after massy
NOT that an M1 with $M1<0$ will not PUSH off an M2 with $M2>0$

$A = G\, M2 / Q2\, D^2 < 0$ for $Q2<0$?
$A = G\, M2 / Q1\, D^2 < 0$ for $Q1<0$?

Apr 24

[todo include geodesic integrals with 3- and 1-spatial dimensions? For “warp nav” part essay]^^^
photos apr 24, first pages notebook [and for black hole solution

Apr 25

Saying then that
If in train example
The bystander shines a light up
That the passenger should measure the OTHERs time to be slower

They will measure rather not equal and opposite time dilation
But equal length contraction

I'd length contraction equal to time dilation
In ¥=1/2 what is time to accelerate
Not only is the final velocity of Accel =v¥
But time to reach that is also =t/¥
(more time, less velocity)
So that for a=1 m/s^2 only 1/2 m/s will be reached in ....
To give same velocity if v'=v¥?
a t ¥^2 =

Give same velocity with (a t)' ¥ = a t
And same offset with (1/2 a t^2)' ¥ = a t^2?
Because t ^2

https://youtu.be/AORsw8NpN4E

F = m a
E = F d
E2 = a d = m^2 / s^2
Combine
Accel of K q1 q2 / D^2 M1 and G M2 / D^2
Or K q1 q2 / D^2 and G M1 M2 / D^2

apr 29

wave collapse function light physicsforums.net first absorb

How do photon wave impulses diffract and interfere

Impulse has peak and crest?
What is amplitude.to electron absorbtion

Red green blue rod.cells
Chemical only activated by frequency energy
Intensity amplitude then mixes contributes to color

Amplitude intensity is generated by more electrons releasing coinciding impulses?
And crest trough trailing can cancel out and are of length equal wavelength?

Maybe electron photon absorbtion depends on electrons current velocity energy to give lower and upper frequency limits

Would negative amplitude be negative frequency as the electron turned around and continued bremstrahlung?
Without direction since wave direction is away from emitter
How is that different from just red shift
Or if electrons opposite accelerating give each other crests troughs that cancel?
Because really impulse absorbed by first contact
And doesn't make sense for crest trough exactly meet at electron?
But makes sense for all frequencies absorbed even if overall red shift emitted by electron moving away from receive?

Negative amplitude is just a difference of the amplitude that goes down... differential... frequency... no such negative amplitude... discriminator circuit.... signal processing.... every second wavelength wave riding lower wave , decomposition

123123 => +1,+1,-2,+1,+1 => 0,-3,+3,0 => -3,+6,-3
or
123123 => +1,-2,+1 => -3 or +3, depending on start place, by twos

If not trailing wave crest trough of length wavelength
Doesn't make sense for impulse blueshift and redshift to coincide to give interference diffraction
Unless we see is overall generalized rough effect

So at time of absorbtion of wave impulse
All other troughs taken into account
And so then all other crests also?
Or is it gradual impulse wave absorbtion? With frequency energy distributed across the wave?
So then is the trough also absorbed and doesn't cancel out same impulse? And adds up to positive energy?

So how is trough give positive energy for same impulse but cancel out for others?

Troughs negative amplitude aren't absorbed
They just cancel out other energies
So
The impulse crest top is time of absorbtion
But gives any continuity of amplitude with troughs

Then that is not same distribution as water wave diffraction
Or light slit diffractions

Maybe amplitude intensity is also energy
But a lot less meaningful than frequency

If gradual
Then how does electron know it can absorb photon
Without knowing full energy yet

If troughs affect crest impulse how then they are not absorbed.make sense?
And if gradual absorb then how to subtract holes from wave layers and make sense?

Electron absorbing feels sine wave of wave
Starting from zero amplitude going up then trough

Maybe only same frequency give trough crest interference

Otherwise how then do radio micro etc uv infra not give interence with visible

The question is
Will we see electron being effected by same frequency diff phase crests to give interference gentle

Assuming all photons absorbed
And photoelectric effect doesn't mean only some photons absorbed
Gradual makes sense or

The absorbing electron will be met first by phot
And subsequent ones absorbed by that will meet trough of first

As the photon passes through the entangled electron
The velocity is added based on the wave

apr 30

12:20 pm:

Problem 1 light wave interference collapse
Problem 2 light speed faster than light matter
Problem 3 unifying fields curvature

1:09 pm:

How does a particle steer proper Accel / ?
What is like up changing with electric gravity and electric Accel to mass gravity and mass Accel?
Is warp space of path the unification of electric and grav curvature of particle?

Screenshot_20170430-130715.png

LTE
1:07

3:07 pm:

can also show with numbered zeroes infinities
that after zero acceleration point the continued walk vector is forward?
Ie using limits calculus

may 1

12:03 pm:

as happens when perpendicular cross product of a walk vector and an acceleration vector that parallel gives resulting plane of possible directions instead of a vector
as happens if interval length is too great or there's an abrupt change in acceleration, or if spiral angle is 90 degrees
if spiral 90 degrees then all cases give resulting vector from perpendicular cross that is in line with acceleration vector... ie, all lines from the resulting perpendicular plane at a spiral angle of 90 degrees would give acceleration vector itself, or its negative, depending on the direction of the walk vector with respect to acceleration and the order of the cross product variables

1:55 pm:

E = kg D a = M a D
E = Mm G d / D^2

M mass of attractor
m mass of test particle
d distance to accelerate to light speed
(Rather is d' = D – d, to give lower d' and E at greater D and lower M)
if keep masses same then greater D → greater d (to accelerate to same light speed) and also
overall C (D – d) / D^2 is, so D double dividing
D starting distance between masses
D changes with t so it is integral of dD and dd

2:04 pm:

E = kg d a = m a d
E = m K q1 q2 d / D^2 m = K q1 q2 d / D^2

2:23 pm:

distance d to accelerate to center with
increasing accel “a” gives infinite energy because
accel is infinite at center
an average acceleration can be found to give the same distance in the same time but
not without the same end velocity, which would be infinite

energy is the work done to accelerate a distance d of mass m.

2:25 pm:

integral C dd / dD^2 will give C / dD = C / dd
because the changes between d and D are the same.

2:29 pm:

so integral M m G dd / dD^2 = integral M m G / dD = M m G / dd
can also calc dE as using function dd(x) of position x as distance to accelerate
to light speed from x with always starting velocity 0
and also approaches similar but different curvature

2:33 pm:

work can also depend on initial veloicty and all
energies added up
work will be work done accelerating its part or resisting others
over time interval? Up to certain speed? Or distance?

2:42 pm:

integral G M m / dD simplies to give distance to accelerate
to light speed d or rather d' term, G M m / d'
or can be some other arbitrary distance
then it can be just not acceleration to center but general work done
regardless of velocity, but taking velocity into account at those points
but d' depends on distance to achieve something else, e.g. speed
so if speed never achieved...

2:43 pm:

but negative E can also be considered

2:45 pm:

ie to decelerate (if force is attractive) or repulse to negative speed, or to attract if force is repulsive which also brings up considerations of other forces at work (of other particles, if choosing a speed or acceleration to attract when the force is actually repulsive, which would mean reversing time and perhaps bringing other particles into consideration)

3:14 pm:

regardless a greater m will require a greater
fraction of the distance to the center to
accelerate to light speed
maybe use fraction f = d' / D = (D – d)/D
(unitless ratio, to scale something, to get energy or curvature surface areas)

3:14 pm:

curvature is then... still depends on m's

3:30 pm:

distancing of resulting manifolds should be related
to accelerate whatever magnitudes at
starting walk points, not some meter or starting unit

3:38 pm:

curve depends on what is the meaning of a 360 degree turn of a manifold
or what the touch of a manifold with itself or others means
different curvatures for: electric energy, gravitational acceleration, inverse electric acceleration, charge
(and varying by test particle: electric acceleration, gravitational energy, and also actually electric energy because even though no masses appear there in the equation, the d' depends on masses)

inverse electric acceleration decreases with greater mass
$K q1 q2 / m D^2$
unlike gravitational
$G M / D^2$

4:05 pm:

could still be used for curvature meaning?[If combined with meanings of what is 360 and touch
then will know what is meaning of curvature and how they can be meaningfully combined,
what particles will be affected by 360 or touch, ie if there is 360 or touch for electric does that mean that only effects electrons or electrons and protons but not neutrons etc...]

charge space won't depend on any masses,
scales just with distance and charge polarity
acceleration space scales positively with mass (of the attractor)
inverse electric acceleration space scales dividingly with mass (of particle or object being accelerated)

4:21 pm:

all give invariant spaces that don't depend on any test particle properties
(except a test particle polarity that just determines which of two equivalent but opposite spaces are generated)

4:24 pm:

charge space is also force space by K qT

=====move:===
the first are all invariant shapes that don't depend on any properties of a test particle,
except electric force space, which depends on a test charge qT, which can be +1 or -1,
giving one of two possible curvatures with reversed arrows or twisting of neighbour lines
depending on how polarity of magnitude is considered
but really they are the same but opposite curvature
and electric force space is related to charge space by a factor of K qT
the challenge then is combining an invariant curvature of electricity and gravitation to give one curvature, without having to use extra dimensions
====:move=====VVV? Original.... moved done^^^^

4:33 pm:

spiral angle of 90 degrees gives a trajectory without acceleration velocity accumulation
or starting velocity straight to accelerate to source of attraction
and could probably require a 2- or 3-grid of starting points
because it won't even have any sideways continuation walk surface and would be just lines straight to attractors, taking into consideration the net force of all attractors at that point

[regardless of spiral angles or any units, the manifolds should give the same 3-dimensional shapes which means it is invariant]

5:39 pm:

E = m a d = F d

how much earth is accelerating us down, how much work it does on us
equivalent to a rocket that applied the same force over a distance d
or a constant acceleration “a” of mass m over distance d
the distance change resulting from changing the position coordinate x due to acceleration
isn't counted as part of d
actually it is... eg particles
but then it means that d must grow faster with growing velocity to increase E by the same amount?

5:46 pm:

there's work done in accelerating something against gravity
there's work done in accelerating something down by gravity falls
is there work done in keeping you standing on earth against its pull if there's no distance change?

5:47 pm:

what is
F t
or
m a t
?

Units, meaning, terminology... can be used to express “energy” of a force applied over time, like earth or a rocket

5:50 pm:

in pushing a rock or rocket up,
a = G M
(or a = G m ?   is the energy or work done the opposite of the acceleration of the earth's pull,
or does it depend on the mass of the object being accelerated? Actually there is an “m” in “m a d”, so a = G M,)
it is pull towards earth
and d is distance moved up
and m
(for d=0, no work? Even though canceling out pull of earth?)   ==move?VVV==

5:53 pm:

if earth is a proton with mass M and the rock is an electron with mass m...
or asteroid m and earth M and distance -d down
E = integral G M m (-dd) / dD^2 < 0
(for upward net distance)

5:58 pm:

in two pullers of both mass M, and a pulled with mass m,
work done by the closer mass M overcomes the acceleration of the second M that is farther,
like inverse acceleration? (can use inv accel electric to calc energy?)

6:02 pm:

work must be done against an opposite acceleration or else a=0 and E=0

7:32 pm:

or that all the others do against the prevailing force?

7:36 pm:

work must be done against an opposing acceleration or else a=0 and E=0
or energy that a prevailing force does against others?
Or all the others do against the prevailing?
But maybe a<0 over that time and distance moved is subtracted from distance accelerated?
In the time that the rock moved up, its distance pulled down is offset by upward distance of acceleration,
so acceleration distance is a combination,
or rather d = (resistance acceleration movement + push up acceleration movement)
(for a force of constant acceleration, up and resistance)

7:36 pm:

net movement

7:43 pm:

can also take up as being net acceleration or average acceleration
(ie, instead of measuring the distance traversed, measure the acceleration used up, minus acceleration down, and solve for d... [so for a steady movement up, there is an upward force and acceleration that is decreasing with the corresponding decrease in downward gravitational pull at greater distance])
and distance as....
acceleration would be 0 if velocity up is steady, so depending on acceleration...
net acceleration means net deceleration also then perhaps...
integral of accelerations...
for acceleration to not also count as distance there must be some other force....
ie acceleration over distance gives only a small part of the total acceleration in that time, so,

7:45 pm:

measure all particles effects and distance traversed at that velocity given initial velocity also,
and count contribution of acceleration of measured particle accelerator/attractor and make interval distance infinitesimal

may 2

7:47 am

maximum acceleration at event horizon of minimal black hole, not at r=1

8:00 am

Econtrib = m* Fcontrib * dnet

Fnet = 0

Fresist = G M / D^2

Fnet = Fcontrib – Fresist

dnet = ? ½ integral Fnet dt^2 / m
(? ½ tend integral Fnet dt / m)

123 – 127

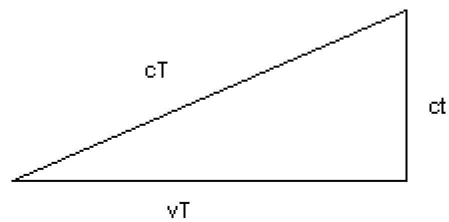
γ

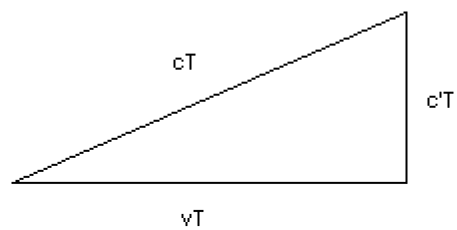
√

$aconst = aavg = \text{integral } a(t)\, dt / tend$
$\Delta x = \text{integral } a(t)\, dt\hat{}2 = \frac{1}{2} aconst\ t\hat{}2$
$\Delta x = tend \text{ integral } a(t)\, dt = \frac{1}{2} aconst\ t\hat{}2$?

$(c - v) / c = \gamma$
$(c - v) / \gamma = c$

i.png

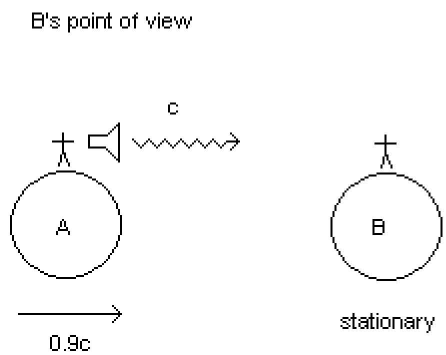




T, D, belongs to each particle separately, each has their own
c belongs to all
for a particle to have its own c, it would appear for light to ….
for light to mover, in its still frame, to be slower than light to the stander
but how would light know to who to adjust its velocity to before it knows …
if it appears the velocity of light is different to the stander than to the mover,
and nothing changes to their relative time or velocities,
then how does the stander not see the mover's c as being slower than normal?
How does it know who is looking at it?
And if the mover measures it as being faster, as being in the stander's speed,
then there must be a contradiction.
If the mover takes his velocity into account, from the perspective of the stander...
the stander can likewise consider himself to be moving, from the perspective of the mover,
and taking that into account, would measure his perceived speed of light to be greater than c

That person's speed of light
is different to me,
but to him is not,
b/c he has a person c'
then I would see his c' as faster

dd.png



0.25 m/s^2
1 m / 4 s^2
0.25 m/s^2 * 4 s = 1 m/s
4 s != √(4 s^2)
a != (2 m/s) / (½ s)

a = (½ m/s) / (2 s)
a = ((1/√Y) m/s) / (√Y s)

11:00 am

128 – 129

γ
√

√Y gives how much speed will be achieved as the reciprocal and as over the amount of time it will take

maybe
$\gamma G \;!= \sqrt{(1 - 2\, G\, M / r\, c^2)}$
$?= \sqrt{(1 - (2\, G\, M / r - vy) / c^2)}$

1:36 pm
130 - 137

h.png

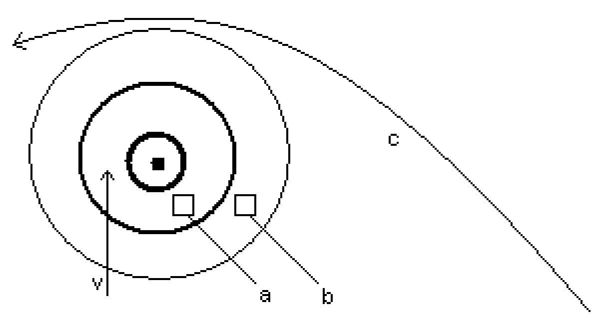


fig #...

an object with velocity and path “v” travels through more proper space for the same coordinate velocity v, the closer it is to the mass

v'' > v ?
v'' = v' ?

proper velocity is then greater than coordinate velocity

in place “a” there is more proper space than at place “b”, the closer we get to the mass

$v\ \gamma v\ \gamma G \Rightarrow v\ \gamma v'' = v\ (c - v\ (\ (c - \sqrt{(2\ G\ M\ /\ r)} - vy?)\ /\ c))\ /\ c$

perhaps need to consider a dilation based on the proper velocity rather than coordinate velocity and gravity, to take both of them into account, instead of multiplying them separately

$vG' < v$
$\gamma G \rightarrow 0$
for $r \rightarrow 0$

$v_{v'} \rightarrow v$ for $r \rightarrow 0$

$vv' \rightarrow \gamma v\ v$
$vv' \rightarrow v\ (c - v)/c$
for $r \rightarrow$ infinity

$vG' = v\ \gamma G$

$v'' > v$ for $r \rightarrow 0$

$vG = \sqrt{(2\ G\ M\ /\ r)} - vy?$

$\gamma G = (c - vG)/c$

$vG = v''$?

$vv' \rightarrow$ infinity
$v''G \rightarrow -$ infinity
for $r \rightarrow 0$

$vG \rightarrow$ infinity
for $r \rightarrow 0$
$\gamma v' \rightarrow$ infinitely

for $vG = \sqrt{(2\ G\ M\ /\ r)} - vy$,
at $vy = vesc$
at r,
there will be no γG dilation
i.e., $\gamma G = 1$

$v'' = vy + vG$? $C' = c - vG$?
Vy'' = XXXXX
$c' = c\ \gamma G$ γG = percent extra space

$v'' = v \, \gamma G = v - vGS$

XXXXX

$v \, \gamma G = v - vGS$
$v \, (\gamma G - 1) = - vGS$
$v \, (1 - \gamma G) = vGS$

$v \, (1 - 1 + (\sqrt{(2 \, G \, M / r)} - vy?) / c) = vGS$

$v \, (\sqrt{(2 \, G \, M / r)} - vy?)/c = vGS$
XXXXXXX?

$v'' = v + vGS$ ===move?==

$\gamma = (c - (v + \sqrt{(2 \, G \, M / r)} - vy?)) / c$

for standing still
with respect to r,
$\gamma G = \sqrt{(2 \, G \, M / r)} \ldots. \ - vy$
it is like moving at
$vGS = vesc = \sqrt{(2 \, G \, M / r)} = v'''y = v''+$

so if falling at
$vy = - \sqrt{(2 \, G \, M / r)}$
then $\gamma y = 1$

$v'' = v + vGS$ ===move?==

it is like vertically you're still?

Only for vGS,
but +v to γ ? (+vy term to γG ?)

so correct,
not only working against G with respect to r,
but also v
(effects of G + v, without +/- vy term?)

2:28 pm
138 - 148

so r=0 still,
γ = - infinity
but also
moving up at r=0,
then γ = - infinity #2 < -infinity

γ = (c – (v + (2 G M / r) – vy?) / c
v, vy proper velocity...

vG = ! √(2 G M / r) – vy?

Should total γy = 1 where v = -vesc ?

At least
down γy = 1 for down v = vesc
but up γy = (c – (2 2 G M / r – down vy?)) / c
for down v = vesc
so in black hole, up γy = (c – (2c – vy))/c = -1 ?
at event horizon

so
if vx,z = 0
then total γ = γG ?

So in r = 0 there is infinite space?

Does anything feel it's own gravity being at r = 0 ?
its own γ depends on ~

with G, standing (x , e.g., coordinate position, as opposed “proper position”, remaining still on the surface of earth against gravity) is still accelerating (a, gravity acceleration or the proper acceleration upward against gravity),
so possible that an acceleration or deceleration (a') is (x') standing still?

For – down vy term in γG , gives up γ = 3C and down γ = 1C
but without – down vy term, up γ = 2C and down γ = 0C
both w/ up vy = vesc

what if r < 0 ….. r' < 0 (rather) ? Complex.... component
e.g., what if up γ = – C, then does up r' = up r up γ also?

148 – 154
3:09 pm

Does prev $\gamma 0$ effect
$\gamma G1$,
if $r1' = r \gamma 0v = r0 \gamma 1 / \gamma 0$?
With $r \rightarrow 0$, $vv0' \rightarrow$ infinity
so
$r1' \rightarrow r$ / infinity => $vG \rightarrow$ infinity
(v_{v0}' is the final velocity, after calculating with velocity γ of v_0', to give final velocity $vv0'$ with v and that γ?)
$\gamma a + \gamma b = (c - va)/c + (c - vb)/c = (2c - va - vb)/c$
$f(\gamma a, \gamma b) = \gamma c$
$f(va, vb) = \gamma c$
$va + \sqrt{(2 G M / r)} = va +$ infinity

notes form lkeep! android

If down $vy > 0$,
down $\gamma < 1$,
so down $r' > r$
so down $\gamma G' > \gamma G$

down $\gamma G' \rightarrow 1$,
for down $r' \rightarrow$ infinity

$v0 \Rightarrow \gamma v0 \Rightarrow \gamma G \Rightarrow \gamma' v \Rightarrow \gamma' G$ … order for getting all values

When
down $vy = c$,
down $\gamma = 0$,
down r' = infinity
down $\gamma G = 1$

If
down a
changes by
down γ
then must also
down vesc' = down vesc   down γ
and
down γG' = (c - $\sqrt{}$(2 G M / r)') / c ?

vesc to r dep.'s on r'?
such that γ' = (c - $\sqrt{}$(2 G M γ' / r)) / c ?
ie solve complex in and out by analysis algorithm in range, trial error match, newtons approximation, adjusting the two until a match is found

or 2 G M γ_{prev} / r ?

We're rotating with Earth, and through space, so vesc' != vesc?
For $v_{x.abs.}$ = 0.5 c, $v_{x.esc.abs.}$ = v_{esc} + $v_{x.abs.}$ B/c   up γG

3:36 pm:

y=x, y=x*1/(1-1/1), y=x*2/(1-0.5), y=x*3/(1-1/3), y=x*4/(1-1/4), y=x*5/(1-1/5)

https://www.wolframalpha.com/input/?i=y%3Dx,+y%3Dx*1%2F(1-1%2F1),+y%3Dx*2%2F(1-0.5),+y%3Dx*3%2F(1-1%2F3),+y%3Dx*4%2F(1-1%2F4),+y%3Dx*5%2F(1-1%2F5)

y=x, y=x*1/(1-1/1), y=x*2/(1-0.5), y=x*3/(1-1/3), y=x*4/(1-1/4), y=x*5/(1-1/5)

y=t

x=x

3:38 pm:

https://www.wolframalpha.com/input/?i=y%3Dx,+y%3Dx*2%2F(1-0.5),+y%3Dx*3%2F(1-1%2F3),+y%3Dx*4%2F(1-1%2F4),+y%3Dx*5%2F(1-1%2F5)

3:42 pm:

y=x, y=x*2/(1-0.5), y=x*3/(1-1/3), y=x*4/(1-1/4), y=x*5/(1-1/5), y=x*0.5/(1-1/0.5)

https://www.wolframalpha.com/input/?i=y%3Dx,+y%3Dx*2%2F(1-0.5),+y%3Dx*3%2F(1-1%2F3),+y%3Dx*4%2F(1-1%2F4),+y%3Dx*5%2F(1-1%2F5),+y%3Dx*0.5%2F(1-1%2F0.5)

[nbew}These equations are then different ways of looking at the same velocity
Whereas in one we transform by t', in the other by T'. X*2 indicates that time (y) grows by 2 for every change of 1 in x, so y is time, and x is position, and (1-0.5) is t'.

155 – 157
4:16 pm

b/c up γG < 1, vesc' = γ vesc
otherwise v esc experienced = vesc > vrocket' experienced esc
b/c to us a v experienced = γ v
so for same √(2 G M / r)
would require greater vesc, so
a, vesc, scales with γ

γv uses objective v, so γG should use objective r?
If … γv uses v γprev? !!
γ = c – v …

v1' already v0 γ1 / γ0

v + vesc > v?

Down v = vesc
down v + vesc = 2vesc = c for vesc = c/2
down γ = 0 => down D' = infinity
therefore .: down a' = 0

up v = - vesc
up v + vesc = 0
up γ = 1 => up D' = D

up v = vesc
up v + vesc = 2vesc = c
up $\gamma = 0$ => up D' = infinity
therefore .: up a' = 0

Up v

158
6:24 pm

or if $v_{rocket} = c$
$c' = c\ \gamma_G$
$v_{rocket} > c'$
$v_{rocket}' = c'$

we know γ_G affects light because it causes the bending of light around stars, where light closer to the gravity travels slower, causing a bend

7:34 pm:

Maybe use xyz of sample points to color rgb of Accel space points

8:05 pm:

https://www.wolframalpha.com/input/?i=y%3Dx,+y%3Dx*1*(1-1),+y%3Dx*0.5*(1-0.5),+y%3Dx*(1%2F3)*(1-(1%2F3)),+y%3Dx*(1%2F4)*(1-(1%2F4))

y=x, y=x*1*(1-1), y=x*0.5*(1-0.5), y=x*(1/3)*(1-(1/3)), y=x*(1/4)*(1-(1/4))

x=t
y=x pos

t=x*2/(1-1/2)
t*(1 - 1/2) = x*2
t * (1 - 1/2) / 2 = x

8:55 pm:

t * (1 - 1/2) / 2 = x

t / 2 = x * (1 - 1/2), t / 3 = x * (1 - 1/3), t / 4 = x * (1 - 1/4), t = x, t / 1 = x * (1 - 1/1)

https://www.wolframalpha.com/input/?i=t+%2F+2+%3D+x+*+(1+-+1%2F2),+t+%2F+3+%3D+x+*+(1+-+1%2F3),+t+%2F+4+%3D+x+*+(1+-+1%2F4),+t+%3D+x,+t+%2F+1+%3D+x+*+(1+-+1%2F1)

8:58 pm:

t / 1.1 = x * (1 – 1/1.1)

159 – 170
9:59 pm

t/(1/v) = x * (1-v/c)

t' = t/γ
^ movinger's t

t = γ t'
^ movinger's t

if D' = D/γ ,
does v' = γ v or v' = v?

even though $L_{obj}' = L_{obj}\ \gamma$

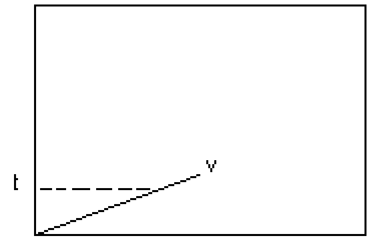
from out, t' < t for x,v

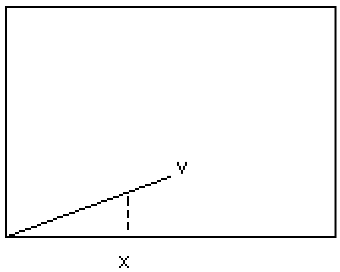
in less out t,
t * (1 – v/c) = x / v

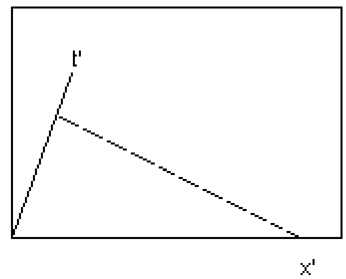
v = x * (1 – v/c) / t   from out perps, t = out
v' = x / t (1 – v / c)

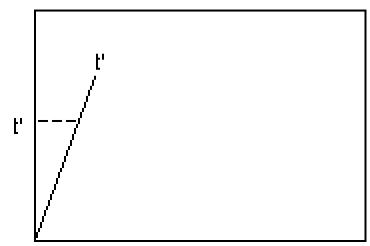
from out, t' < t, x' < x

g.png









$x = tv \Rightarrow (t\gamma)v = t(v\gamma)$

$v = x / (1 - v/c)\, t \Rightarrow (1 - v/c)\, v = x / t$

if gettting v',
vel in out POV => $v' = x / t\, (1 - v/c)$
$v\, (1 - v/c) = x / t'$ <= time for mov in stander's POV

$v' / (1 - v/c) = x / t$

$v(D) = \Delta x / \ldots D$
$v(D) = D - v\, t \Rightarrow v(D/\gamma) = D/\gamma - v\, t$?

$v'\, (1 - v/c) = v = x / t$
$v\, (1 - v/c) = x / (t / (1 - v/c))$

$(c - v)/c = \gamma$

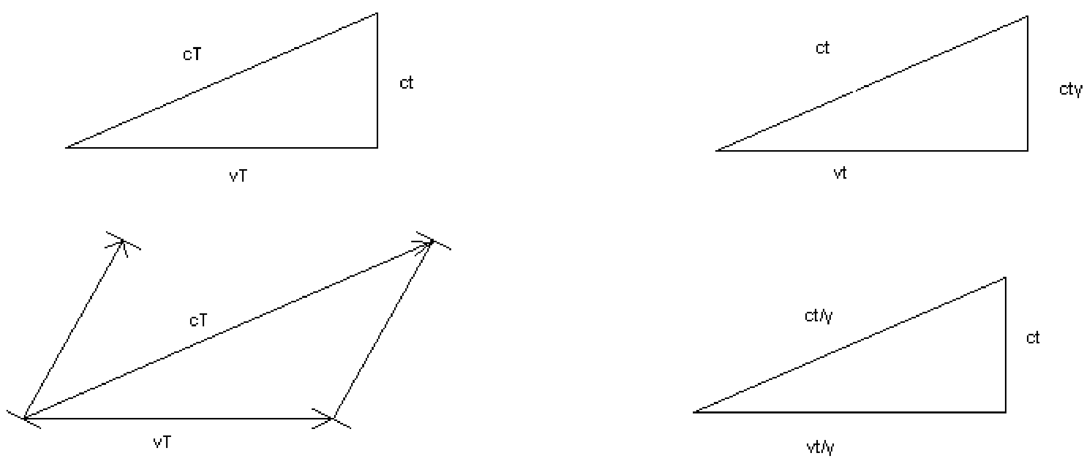
$(c - v)/\gamma = c$

$ct\gamma = c(t\gamma) = d\gamma$

170+
10:12 pm

f.png

If mov's t, or light d'=dγ scaled (top)



If mov's v, or out t, scaled, or mov's D'=D/γ (in out POV?) (bottom)
171
10:17 pm

v,t,d
in POV 1,2
=6

172
10:23 pm

j * (-1) ^ (1/2n)

$j * (-1) ^ {(-1/2n)}$

any real rational: $k/2n$

may 3 2:48 pm:VVV
[Also
When one has complex coordinate
By force attraction etc
All gain imaginary component
No matter how small
And it may be a second root and forth and sixth etc all leading to.tiny accumulations of anomalous behaviour or dimensionality]

11:42 pm

find: cos O = adjacent, adjacent>=0, hypotenuse = 1
given: O
$\lim_{n \to \infty} \left(\sum_{i=1}^{n} \left(\sqrt{ (x_i - x_{i-1})^2 + (y_i - y_{i-1})^2 } \right) \right) = O$
$x(i) = x_0 - x_f\, i / n$
$y(i) = \sqrt{1 - x(i)^2}$
$x_f = a$
$x_0 = 1$
$y_0 = 0$

11:43 pm

then:.... too much

may 3

1:27 pm   may 3:VVVV
[Edit
For wave collapse
Add
Wave expansion simulated by tri mesh sphere
When expanding and a sphere tri gets too big, split it into three, with center vertex moved forward by amount that would be expected ahead if it was there from beginning
And when refracting
Curve points expansion direction heading to refracted angle from initial angle etc]

2:48 pm:
Also
When one has complex coordinate
By force attraction etc
All gain imaginary component

No matter how small
And it may be a second root and forth and sixth etc all leading to.tiny accumulations of anomalous behaviour or dimensionality

12:03 am

$x^2 + y^2 = 1$
$(x + 0.5)^2 + y^2 = 1$
at $x = -0.5$ will be center so
resulting coordinates on the graph $x'+0.5$ = opposite triangle side length
want to go a distance from x_0,y_0 at 0.5,0 to O
away along circle to the left,up, with increasing n intervals
approximating exact angle with infinite bends steps

12:07 am

circumference = 2 pi r...
so go up O/n = y
then...

12:19 am

left to $x = \sqrt{1 - y^2}$ then up again to get to x or y
and also subtract $\sqrt{x^2 + y^2}$ from O
and remaining O to get to x or y
jump by whatever O increment
maybe back to -y,-x with smaller O increment next time when overshoot and add back to O the $\sqrt{x^2 + y^2}$

$\gamma = (c - v) / c$

$x' = \gamma (x - vt) = \ldots$
$t' = \gamma (t - vx / c^2) = \ldots$

12:36 am

maybe go straight to O initially and just decrease decrease intervals for n steps
narrowing on xf or yf and maybe don't overshoot with y = O > ymax = 1
or else then complex with $x = \sqrt{1 - y^2}$

12:50 am

either way if O complex then so y then so x and so use vectors for O
or learn sqrt, square
√(1 – y^2) = (1 – y^2)^(1/2) = (1 – yr^2 – yr yi – yi^2)^(1/2) =
what number to pow 2 will get 1 – yr^2 – yr yi – yi^2 =
two possible solutions square roots for complex
(a + b i)^2 = ` - yr^2 – yr yi - yi^2
de moivre's
(r (cos O + i sin O))/2 = +/- √r (cos (O/2) + i sin (O/2))
yr' = r cos O / 2 = 1 – yr^2
yi' = i r sin O / 2 = yr yi - yi^2

12:58 am

given z = c + di
and needing √z = a + bi lying in the first two quadrants
we have the quadratic equation
a = √((c + √(c^2 + d^2)) / 2)
and
b = (d / |d|) √((-c + √(c^2 + d^2)) / 2)
where d/|d| is used to get the sign of d
which is the solution to squaring a + bi,
a^2 – b^2 + 2abi = c + di

1:24 am

z = r + j 2rt(-1) + k 4rt(-1) …
√z = …., r#2 = j 2rt(-1) i, 2rt#2(-1) = k 4rt(-1) i
b = … √ c … d …, d = cx d' = cx / i d = d' i
d'_r ,. d'_c (d''_i?) (d'''_r?)

∜

∛

√

⩽ greater than
⩾

“”Every complex number other than 0 has n different nth roots.

1:31 am:
keep
what f such
i^2 + r^2 = f(i √-1 + r)
or
fi(...) = i
fr(...) = r

6:50 pm:

1/√-1 = 1/i
i * 1/i = 1
i * i = -1
1/i * 1/i = -1

11:35 pm:

Gravity effect of M on m lags by r/c

For r = 5 c s
Lag will be 5 s
So attraction will be toward position of M 5 s ago

??

For r' = r / ¥. For ¥ = -1,
The wave gravity

For move z11. With inward ¥ = 11?,
r' = r / 11

-1 ^^^
Wave gravity will arrive at delay of - r / c
In terms of v, d, or t
In back, for v = - 2 c, (ie for ¥ = -1 it is moving inward at 2c),
For back ¥ = 3, so back is outward gravity and so is front

¥ < 0 also for high grav source
So a black hole would never emitter any gravity
And wouldn't pull in anything
Because the waves gravity would be inward....
Maybe inward all goes outward other side
But maybe the gravity wave then pushes instead of pulling

And maybe it is the remnant of the state of the black hole in the past that is causing a wave that is still positive,
Because time approaches zero at the event horizon
So
If the idea is correct

Chasing black hole or object where the light comes from. Or was
So if. No light then no gravity
?
Nothing can travel faster than light and the proper state of the universe from an observer event point is determined by light speed and light arriving and therefore so is acceleration and gravity, the very effect of reality
Vs coordinate state of the universe
But light is also.affected by gravity and extra space but gravity itself is not
Do we or do we not feel attraction to a gravitational shadow or to a real object regardless of.light speed
If the earth and sun are speeding at a fraction of the speed of light
Then shouldn't the earth be chasing a shadow sun
Or else the speed of gravity can't be caught up with
Ie accelerating toward a gravity source won't allow you to be updated on it's gravity emission point faster coordinate
So the speed of gravity is constant like light
So
If an object is moving toward a gravity source
It's time will again slow down or distance increase to make the speed of gravity constant
That is already happening with light so it is the same effect working for both in the same way
For every emitter of light or gravity
The dilation effect helps
But if an emitter is getting closer
And rate of increasing accuracy of true point of gravity is increasing
Then does gravity somehow pile on as wave wavelength frequency amplitude whatever
And what if it is. Not time dilation but distance change or velocity scale
If when accelerating toward emitter distance increases by ¥,
The effect will be longer time for light from emitter but shorter wavelength
But how is gravity slowed
Is it the gravity wave of true point
Ie so if lower wavelength gravity is the offset from true point.   Even though no way to measure g wvlen.   Or rather velocity of approach toward true point
So if true Coordinate emitter is leaving at v
v' of gravity wave is v ¥ > v
Where v < 0. So v ¥ < v < 0
Even though v' is the v that object itself experiences of itself
Because the twins t' manifests itself visibly to the other twin on earth
V' also manifests itself to the stander
Rather because v is away, not because we're measuring v relative toward inner stander, away ¥ < 1!!!!!!. (correct)
So we should see a grav emitter gravity strength decay by lower.... Not just because of v' being lower than v,

But also light being emitted at v' ....
Distance inward d' = d / inward ¥ > d,
So even thought wavelength of light inward toward stander is of v' and v before that of redshift,
.... Observe gravity decay slower than just at v if for example toward another attractor or away from stander,
Maybe all frequencies of light are caused by red or blueshift of light because of movement of electrons emitting relative
... but gravity should appear to travel at the same time... Constant c... Regardless of whether catching up or not
So if d' to d changes the gravity will appear to decay slower
But if .... C isn't affected by d' to d, only wavelength of c....
So G isn't affected by d' to d.... If the emitter Is moving away at v then G wave lags true emitter source coordinate by d / c. And by time t v / c
What is the meaning g of the speed of gravity
It's not a point that lags behind by c
But rather a wave that informs others of that point of attraction when.it reaches others
So if two g wavefronts intersect
Eg moving into own g wave front
Even though slower than c
But then own g waves appear slower than c
Because the crests ahead will be leaving slower
If emitter approaching object at 0.5 c
At t = 1 intersecting
The force of a distance d = 0.5 c s will be felt only t = 0.5 by stander
And the emitter will only see the stander attracted by d = 0.5 c s by t = 0.5 + 0.25 for light to catch up
By the time t = 1,
Emitter velocity will appear to have increased on approach due to faster arrival of gravity wave crests even though true velocity is constant

...judging by the changes in force of gravity with time

may 4:

9:06 am:

how if light is wave, through light rod cell in eye
that like photon, going straight through rod, will not be absorbed by walls
but only at the end by receptor molecules?

if the speed of light is affected by gravity
then the speed of gravity would be out of sync with light
so if gravity speed is also effected by gravity strength at that point
then gravity will be infinitely slow or v=0 at r=0?

inward and outward ¥G = -infinity at r=0 so inward and outward D' = D/-inf = 0 so the (proper?) D' is 0... so proper time to traverse it would be t' = D'/c = 0?

is gravity dilation and light dilation also affected by its velocity? n
otherwise, c - v = 0... ¥v = 0

but gravity v' = v ¥ = -inf?
so t' = D/v' = 0?

ie the strength of the previous iteration of gravity at that point?

but as vesc -> c, ¥ -> 0 so D' -> D/0 = inf so t' -> D'/c = D/v' = inf

so if light warped by electric gravitation,
or by gravity of mass,
at r radius where vesc = c,
no light should escape an electron,
where ¥ -> 0

is anti-gravity mass or negative/opposite charge,
the opposite of denser medium,
ie, light refracts the other way,
and becomes faster?

becomes protons are positive charge,
maybe like doesn't escape them,
but electrons are like anti-gravity,
so they emit light... or vice versa... so protons don't absorb light, and electrons make light go slower and trap them

maybe light* doesn't escape...

we know light is affected by gravity,
because of gravitational lensing,
and black hole trapping light where vesc = c

but after that, vesc > c,
¥ < 0,
so if it "skips" through exactly where vesc = c,
¥ -> -inf,
so it would go back to where vesc = c ?

if inside vesc > c,
the gravity from center must propagate at
¥ < 0,   such that ¥ -> -inf   but outward ¥ -> 0 farther out from center...
so the gravity waves D' -> 0 at center, and D' -> -inf farther out from center,
and D' -> -/+ inf at center,
and D' -> +inf at arbitrarily (infinitely) far away,
so infinite space fits in a finite space?... as D->+inf (coordinate distance), because vesc->0, then D'->+ +inf (proper (physical?) distance), so even though
light or matter would travel D->10, it would fit in a proper space of D'->10/(¥G)>D .... rather... D' is the amount it moves in coordinates, its appearent distance covered, with v unchanged, with dilation factored in, and D is the distance in space it would have covered if there was no gravity, where there would be no "extra space"... flat space,
how does "more space" cause the coordinate position to change, without "proper position" change?
how does it lead to acceleration?
so together the border of space is,
D'/D = (D/¥)/D = 1/¥ = 1/((c - vesc)/c) = 1/((c - sqrt(2 G M / D))/c) = 1/((c - sqrt(2 G M / inf))/c) = 1/1 = 1 ?
flat space,....

if an object is whizzing by in front at 0.5 c,
when it is directly in front,
we will see the light that is behind it,
but the gravity would be in front if gravity is infinitely fast,
so there is the argument for gravity waves

infinite space fitting in a finite space, like a penrose diagram

maybe the universe is like a hyper-earth or hyper-planet,
where even though it is infinite... not like earth, where going around would go repeating around, not really infinite unique,

two ships sent in exactly opposite ways would collide directly when they circumnavigated the earth, two spaceships sent in exactly opposite ways would collide directly when they circumnavigated the universe, (extra dimension, where surface is two dimensional, we can see the extra dimension)
and two ships going exactly parallel on earth would intersect paths because the earth is round,
and two spaceships going exactly parallel in the universe would intersect paths because the universe is "round"...

$Q/V = Q''/V'$?
$V' = V/\yen$
$Q/V = Q'' /(V/\yen) = Q'' \yen/V$
$V = D$ for 1 dimension space
at $D = 1$, $Q= K\, q1\, q2 / D^2 = K\, q1\, q2$, $Q' = K\, q1\, q2\, \yen / D^2 = 0.5\, K\, q1\, q2 / D^2$ for $\yen = 0.5 = (c - vesc)/c = (c - vesc)/c = (c - sqrt(2\, G\, M / D))/c$ with $2\, G\, M = 0.5^2 = 0.25$
so $Q = 1/1 = 1$ and $Q' = 0.5$ for $K\, q1\, q2 = 1$ and $Q''\, \yen / D = Q / D \Rightarrow Q''\, \yen = Q \Rightarrow Q / \yen = Q''$
so $Q'' = 2$
at $D = 2$ $Q = 1/4 = 0.25$ $\yen = (c - sqrt(0.25 / 4))/c = 1 - 0.25 = 0.75$ $Q' = 0.25\ \ 0.75 = 0.1875$
and $Q'' = 0.25 / 0.75 = 0.333...$
would this be in conflict with gravity D^2 law if the emitter is moving relative to stander?
in the stander's point of view... at $D=1$ for $a = 1$ and $a'' = 2$ and $a' = 0.5$, because the ... rather the emitter is still and the mover is the feeler...
and because the
[would this be in conflict with gravity D^2 law if the emitter is still and the emitter is compressed (not dilated or contracted) due to velocity of feeler...
[would this be in conflict with gravity D^2 law if the emitter is still and the FEELER is compressed (not dilated or contracted) due to velocity of feeler...
and because the. $da''(dD') = (G\, M / (D' - \Delta D')^2) / (\yen) - (G\, M / D'^2) / (\yen) =$
$(G\, M\, \yen / (D - \Delta D)^2) / (\yen) - (G\, M\, \yen / D^2) / (\yen) =$
$G\, M (1 / (D - \Delta D) - 1 / (D))$
$!= da(dD) = (G\, M / (D - \Delta D)^2) - (G\, M / D^2)$??? === ! actually

otherwise if not a'' but a', then
$da'(dD') = (G\, M / (D' - \Delta D')^2) - (G\, M / D'^2) =$
$(G\, M\, \yen / (D - \Delta D)^2) - (G\, M\, \yen / D^2) =$
$G\, M\, \yen (1 / (D - \Delta D) - 1 / (D))$ ==
so for the same coordinate distance, and moving giving ¥,
the moving feeler would feel a different acceleration
!= da(dD)
can also be thought as different time

but
for da''(dD')...
the moving feeler would not feel a different acceleration...
no different time....
so in coordinate acceleration... and distance...

if the a'' compared to a   doesn't feel a different acceleration with change in D'...
the acceleration will be faster than a'...
(coordinate acceleration)...
a''(D') = a''(D/¥) = a'(D) ¥ = a(D) ¥^3   because a'(D) = a(D) ¥^2   eg Δx or a(D, t') = Δx or a(D) (t ¥)^2

actually
da''(dD') = (G M / (D' - ΔD')^2) / (¥) - (G M / D'^2) / (¥)   =
(G M ¥^2 / (D - ΔD)^2) / (¥) - (G M ¥^2 / D^2) / (¥) =
G M ¥ (1 / (D - ΔD) - 1 / (D))
!= da(dD)

actually then : ""
otherwise if not a'' but a', then
da'(dD') = (G M / (D' - ΔD')^2) - (G M / D'^2)   = XXXX
da(dD') = (G M / (D' - ΔD')^2) - (G M / D'^2)   = YYYYY correct   not da' but da

so if
da''(dD') = da(dD) ¥
it is like said earlier
thought wrong later
that
da'(D) = ¥ da(D)
so...
why...
da(D/¥) != ¥ da(D) ?

so instead of   dilation or contraction   with da'(D) = da(D) ¥^2
then instead with compression is   da''(D) = da(D)
and for D'   and a/D = a''/D'   da''(D') = da(D) ¥
?
then just scale linearly with ¥.... the distance and time and velocity and acceleration...
so for the same time to the mover...
velocity would change by a(D) ¥

is that dependent on da'(D) = da(D) ¥^2   having square ¥
or would   a/D = a''/D'   ensure that its linear ¥ scale with any da' definition?
if already linear....

ie if da'(D) = da(D) ¥   or equivalent   da'(D) = da(D/¥) = da(D) ¥   never mind the contradiction in the D'^2 being D^2 / ¥ ...
then

if it was linear...
for the same time to the mover...
velocity would change by a(D) ¥^2
....
so for the same time, scaled,
rather x delta would change by a(D) ¥^2....

so for the same
actually... that makes sense...
because ... actually...
is a(D) ¥^2 meant for a position change or velocity change...
it depends if it's t or t^2...
and therefore doesn't make sense for distance being changed, then how to reconcile an equivalent way of looking at it
by length contraction rather than time dilation....
if it is really time dilation... acceleration and velocity slices scale linearly...
if it is really length contraction... acceleration and velocity slices scale quadratically and linearly respectively...
if in train example eh guess charge is compressed then the a''(D')/D' = a(D)/D and a''(t)/ where t is time dilation or interval... or measure as accumulated acceleration for position but without changing position, to affect future evolution of a(...), so that a(...) is actually Δx ....
then a''(t')/t' = a(t)/t
but if a(...) is considered to be the change in acceleration as position and distance evolves.... rather the acceleration itself, not change in accel...
still works....

if we say that a''(D')/D = a(D)/D and ... doesn't depend on a'(D)... just depends on D'...

if not distance accumulation but velocity change... also scales linearly... with time....

if up gamma = -1 and d/gamma = -d then up accel ' != accel gamma^2 = accel but accel ' = accel gamma = - accel

and if an object moving is compressed in half
then a correspondingly scaled distance that had a force acceleration of 1,
should have a corresponding force acceleration of 1, in the NEW distance (scaled ').... yes
with compression
but with length contraction or dilation...
a correspondingly scaled distance that had a force acceleration of 1...
would have a corresponding force acceleration of

and in new time scaled ' ?.... yes

would have a corresponding force acceleration of 0.25 original for the same original point, unscaled...
(coordinate point position)...

but for a coordinate point that was

what then happens because for compression the other objects do not actually get closer, or get scaled, so their coordinate position remains the same...

either way...
for a coordinate point that was....
for a corresponding scaled distance... gotten by halving the distance of the original... so something at the front of the object for example,
becoming half as far in coordinates, but the same in proper coordinates (distance... proper)...
a' (D / 0.5) = a(D) gamma^3 = a(D) 0.5^3....

for compression...
a'' (D / 0.5) = a(D) gamma = a(D) 0.5....
still not correct..
but because the acceleration is now proper acceleration... ie.... the distance it accelerates inward for example is equivalent to what the distance would have been if uncompressed... not to confuse proper acceleration here with the proper/relativistic/einstein acceleration and gravitational acceleration distinction

for contraction or dilation...
a'(D / 0.5) = a(D) gamma ^3 for the same corresponding point or front of the object that was scaled by 0.5 ..... the acceleration in equivalent scaled meters would be... a(D) gamma * time (time^2 for position, time for velocity change) ... but we get not only scaled meters but time.... so .... doubly scaled.... so in the time it would take for the front point to move to an equivalent point in front or behind... it would also.... take more time... in the scaled version... from the outside for a stander...

for the
if up gamma = -1 and d/gamma = -d then up accel ' != accel gamma^2 = accel but accel ' = accel gamma = - accel
it means
when v = 2c...
accel ' = - accel
not accel ' = accel
ie we use accel '' instead of accel '

a'(d) would only have been a change in acceleration with coordinate positions and accelerations... not proper...

so x' = integral a''(d') + v' = ¥ (integral a(d) + v)

everything scales linearly

so a''2 = a''1 ¥2 / ¥1

a''(d') = d ¥ = (d/¥) ¥^2

so we have correct... the scaling of the acceleration being square ¥, of d', which is scaled linearly by ¥...

ie ^^^^ is delta x....

below... instant acceleration...

a''(d') = a''(d ¥) = a(d/¥) ¥^2...

if time is dilated from outside perspective by t ¥   and distance by d / ¥
then from the outside the v' = (d / ¥) t ¥ = d / t... same velocity... if we take doubly the time and space dilation...

a''(d') = a''(d ¥) = a(d/¥) / ¥...

so for instant acceleration... the coordinate acceleration instant we get with a scaled distance....

so a''2 = a''1 ¥2 / ¥1
scales like v'2 = v'1 ¥2 / ¥1

so
so for instant acceleration... the coordinate acceleration instant we get with a scaled distance.... must be scaled into the proper time or distance that is equivalent to our new size... because the coordinate acceleration would have been ... at the same equivalent point... we must....

because the coordinate acceleration would have been ... less than proper acceleration by a factor of ¥ .... even though the distance has been scaled... at the same equivalent point... we must.... divide by ¥... to get the equivalent distance or velocity change over an equivalent distance or time span.... in the scaled meters^^^

because the coordinate acceleration would have been ... less than proper acceleration by a factor of ¥ .... even though the distance has been scaled... at the same equivalent point... [in the scaled meters] ... we must.... divide by ¥... to get the equivalent distance or velocity change over an equivalent distance or time span....

in a different amount of time scaled t', a' would give the coordinate acceleration that would be felt keeping the force of gravity the same to the mover... ie only dilating time or distance ... but not experience of acceleration ... it is like the object is slowed, from the outside, but to the outside it is as if the force of gravity remains the same... for the object to be truly transformed by gamma... it must also feel the acceleration .... so from the outside, the mover would accelerate at the same rate to itself and observe no change in its own acceleration... otherwise if we use a' (using a'' before sentence <<<)

then... to the object moving it would notice a slowing in acceleration in its own meters... and to the outside, we would notice a change in our meters of acceleration not only a slowing by ¥ but ¥^2 ...

Proper einsteinian relativistic
Vs
Gravitational or Newtonian
Accel

Objects want to go to where there is more space
Ie acceleration caused by mass gravity or "extra space"

If time is going slower for mover
Use an orbital fast lab to solve the world's problems in lots of time. With little earth time
If time is going slower for mover
Like nearer mass
Is going faster like going through more space extra
So time slows down when vescape or v is c and
That is like being at an event horizon with critical amount of density of mass
And standing still
And being at v = 0.5 c is like being where vescape = 0.5 c near a black hole and
You will be attracted to where there is more space
To increase v

If charge Q was compressed into a smaller volume V'
Total charge should remain the same overall, not per new smaller volume V'
If the charge was a sphere with boundaries at D
The new D' would be like Q / D = Q" / D'. Such that Integral dQ(D) dD / Dtotal = integral dQ"(D') dD' / D'total
So if there's an offset by ¥ at one place that gives less Q" / D'. Offset by.... Is it only compressed to give an equivalent totsl charge in the scaled D
Or
If truly compressed like matter under pressed...
The density increases.... So charge density must increase...
But total mass and charge remain the same....
But in this case we see total charge less and density remaining the same....
If we wanted the charge density to increase but total charge to remain the same....
Q" = Q. And Q"/D' > Q/D....
And that would be
Q"/D = Q/D
Q/D' = Q'

$Q' / ¥ = Q''$
So $a''/D = a/D$. Acceleration force over distance or

$da''/D = da''/dr$
$a''/r = a''(r)$?
Change a'' of Accel wrt change in r
....
Accel a'' as a function of distance r
....
So conserved is a''(r) Accel as function of ...
So conserved is d...
Distribution unknown....
A smaller equivalent space r' must then have more charge....
$a''(r',r) = a(r') / ¥$
So a(r') gives the new charge Accel if distance r is compressed by ¥.... New distribution ...
In real compression...
A gas compressed from r to r' by ¥
Would have a same mass m(r') where m(..) gives the mass in the original distribution of the provided range of distance and
$m''(r') = m(r') / ¥$. Gives the new mass in the range if the original m(r) is compressed to r'
If mass were to scale by r^2 in range...
If it is distributed such that there is 1 / r^2 less as range is increased... If not. If m(r) = C r. And m(r') = C r'. Then C r' / ¥ = C r. But

Here r is the range of summation
Not the parameter of the strength of mass or amount or distribution at a range r....

Otherwise. msum(rend) = C integral 0 to rend of mstrengthamountat(r) Dr

And

asum(rend) = C integral 0 to rend of ainstantaneousat(r) dr
= integral 0 to rend of (G M / r^2) dr

So asum(rend) = asum''(rend') =
integral 0 to rend of (G M / r^2) dr =
Integral 0 to rend of (G M ¥^2 / r^2) dr / ¥ ^2. If real compression

If other compression. Then /¥^1....

If real compression
Mover will see his in Accel change to accel / ¥ in his own meters and
Outsider will see /¥^2......
In same dt Accel to mover will be Accel / ¥. In his meters. And. For a' with dilation contraction. Accel will be Accel ¥. Slower. And outsider then Accel will be Accel ¥^2.... This kind of in-between between real compression of charge and dilation and or contraction of just time or distance.... Gives the proper acceleration..... And the correct coordinate acceleration for the mover in his meters

In outside time in own meters a''
In own time in outside meters a'?
In own time in own meters a'?
In own time.... Outside meters... a(r) don't know outside meters will be... But if own meters remain same of.accel as without ¥... a(r')   t' = t ¥.   In own time. Own Meters per t' = r' / (t ¥)^2.

Already outside meters in outside coordinate meters. And proper own meters scaled to ¥...
And time is outside.... But how much time passes for same coordinate meters if outside is not scaled by ¥.... Then = a''(r') ¥.   = a(r). = (a(r') / ¥) ¥.   So (G M ¥^2 / r^2 ¥) ¥ = G M ¥^2 / r^2.   So that is a'(r) or a(r').   So previous dilation contraction Accel was correct for coordinate meters for outside if outside is not scaled for ¥... Ie a''(r') ¥ is movers Accel in it's own meters as perceived by outsider if in outside coordinates and .... Contracted doubly.... Time...... a''(r'). Out meters.... To get same meters with diff time... At Accel of a''(r')....
Integral 0 to tend1 of a''(r') dt ^2 = integral 0 to tend2 of a(r) dt^2..... Solve for tend1(tend2)
For a''(r) = a(r) / ¥.   Is acceleration if mover was stretched instead of contracted and distance shrank...ie movers own coordinates remaining unchanged and standers coordinates squished   like if the attractor became closer to the object as it would.be if   a2 / D2 - a1 / D1. =. A2'' / d2' - a1'' / d1'
Linear or quadratic   accum.

Perhaps electrons protons etc particles have size.   Like planets or objects.   Where internal gravity force evens out and isn't infinite.   But has more sideways pulling.   To explain how light escapes electrons. And protons. Etc at r=0.   And maybe even repulsive somehow maybe through an unseen consequence of ¥ etc. When r is low enough.   Or maybe through another force besides electric or gravitational.   Then if like earth with size. Then can have a minimum size for escape of light to be possible given mass charge etc.

If affected by own fields then there is already this repulsive force of gravity and electricity. Which explains electrons etc going where there is "extra space" because there is already a push at r=0 in all directions. Or in an indeterminate direction that is decided by where extra space is...

maybe not only particles have size border
but   they bump each collider off so in blackhole either they bump even though next to each other... or somehow overcome... and might explain electrons not falling into protons

pseudo-force or pseudo-energy   where PE = F t ^^^^   impulse N s

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+-+ln((x%2B1%2Fx))
y= (1/(1+x)) – ln((x+1/x))

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+-+(x%2B1%2Fx)
y= (1/(1+x)) – (x+1/x)

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+-+((x%2B1)%2Fx)
y= (1/(1+x)) – ((x+1)/x)

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+-+ln((x%2B1)%2Fx)

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+-+ln((x%2B1)%2Fx)
y= (1/(1+x)) – ln((x+1)/x)

https://www.wolframalpha.com/input/?i=y%3D+(1%2F(1%2Bx))+%2B+ln((x%2B1)%2Fx)
y= (1/(1+x)) + ln((x+1)/x)

Two neutron stars rotating rapidly around one another gradually lose energy by emitting gravitational radiation. As they lose energy, they orbit each other more quickly and more closely to one another.

Lose g energy when.. result in attracting a particle, removing potential to attract

gravitational waves and gravitational redshift would have to be necessary to be consistent with time travel... and emitting grav waves back in time etc... so laws of physics work same in reverse...

lose g energy... like a phton wave loses energy when absorbed by first contact... but g wave continues and doesn't lose energy itself... and is reabsorbed

gravity camera   detect relative signals of changes in gravitation... using either any-directional accelerometer/forcement... or pointed... like rod cells... either planar... or focus lens like... use to detect bodies emitting gravity   like camera detect light emitters reflectors .... signal processing discrimination circuit differentiation   ....use array   gravity camera sim what looks like....   and effect of waves moving so signals changing   ie effect of gwaves decsribed ^^^^   everything is made of one charge... and opposite charge   is   like the negative ampltitude arising only from differentiation on a higher level.... negative ampltiude would be acceleration in the other way then   but that is direction and not to be confused   what is gravity wavelength   depends on velocity.... same way all electrons phtons wavelengths depend on emitter velocotu relative to recevr   if only one charge.... and gravity... negative gravity caused by... moment when in middle electron   another attractor on one side moves farther away   periodically   and another at opposite side gets closer   getting pull in that way... like absense of attractors being negative in light of others discrimination circuit like in radio signal processing used to differentiate between different wavelength signals encoded on same interspersed wave

either 3- or 2-grid and either 2-grid curved or flat... curved like around ball or earth, might be used to overcome geometry to give default equal readings

electron that first absorbs   taking into account frequency wavelength direction and electrons direction velocity magnitude   to decide coincidents

[^^^^ delta up D12'   <> delta up D21'   &   delta D12' >< delta D21'
“as co-moving electrons or particles continue co-accelerating, their effective distance changes due to dilation but they re-establish their previous distance in the transformed space gradually. Even though the effective center of mass of an electron or particle is offset due to dilation due to direction, in regards to how it feels the forces of other particles, the effect on other particles remains from the center.”]

maybe if... lam ahead 0.5 and behind 1.5.... how is lambda translated into distance... for other particle^^^^^

Unlike light
Grav redshift is not only of constant frequency wavelength for constant velocity but changes with time position
For light
Also should. As the crests arrive faster ... Eg emitter light at 1 c s and moving in at 0.5 c. At t = 1 x = 0.5 cs. And light arrives from t = 0. Wavelength = (c - v)/basefreq. At t = 2. X = 0. But light from t = 1. Arrives at t = 1.5. And at t = 2
Light arrives at t = 2. So frequency from t = 0 to
t = 1. Is c/(1 - 0). And frequency from t = 1 to
t = 1.5 is. c/(1.5 - 1). And from t=1.5 to t=2. Freq
Is c/((0.75)/c + 1.5 - 1.5)
C/(arrived - sent time) = c/((distance fromto when sent / c + send time start) - send time start)
. (from t=1.5 to t=1.75).
And c/(2 - 2). At t=2. So wavelength decreases inward speed w/. Anddddddd position over time w/.
So. Z = 11. Z = (lam' - lam)/lam. Z
Z = ((c/f') - (c/f))/(c/f). = (1/f' - 1/f)/(1/f)
= f/f' - 1

If f = 1
f' = c/(distance when sent). 11 = 1/f' - 1 =
(distance/c) - 1. Unitless ratio b/c numerator f
There have distance. And calc change
D with t change in freq. Also includes atom
Electron v change etc v at t sent
Z = f sent / (c / distance) - 1. Where - 1. Is
Z part. Ratio if f = 2. And f' = 3. Then d = 0.33
But f = 2. Is two crests for t = 1. So time to arrive is d / c =! 0.33 / 1. In 0.33 s. 2 * 0.33 crests sent
If instanteous two crests together
If getting closer. Then z not 11
F = 2. F' = 1
11 = 2 / (c / distance) - 1
10 = 2 (f unit) distance / c
5 c = distance / (f time unit)
T = distance / c. = 5 (f time unit).
In 5 s at t = 0. 2 crests sent. Arrive at t = 5
At t = better
At t = 0 crest sent. Arrives at t= 5
At t = 0.5 crest 2 sent. Arrives at t=5.5
But must arrive at t = 6. So
Multiply by 2. = F. = f/f'? By
At t = 0 crest sent. Arrives t = 5
Second arrives t = 6
If second sent t = 0.5. What v. d.
D1 = 5 s / c = 5...
D2 = 5.5 s / c 5.5 ....

V at emitter = (D2 - D1) / (time period of wave at emitter) = (0.5) / 0.5
For z 11 = f(c) / f(c + v) - 1
10 = f(c) / f(c + v)
f(v) = (f0 w0 + v) / w0
10 = f(0) / f(v)
10 = (f0 (c))/(((c+v)) f0). XXX /f0 = w. C f0 = m/s^2
10 = (c/w0)/((c+v)/w0)
1/10 = ((c+v)/1)/(c/1)
w0 = 1
1/10 = ((c+v)/w0)/(c/w0)
1/10 = (c+v) / c
c/10 = c+v
V = c/10 - c = - c 9/10

Z = (lam' - lam)/lam
11 = (w(v) - w(0))/lam(0). = ((c+v)

C f0 = 1 cs/s / 0.5s. Accel of electron decel

11 = (w(v) - w(0))/lam(0). = ((c+v)/f0 - c/f0)/(c/f0)
11 = v / c

From 1 crest in 1 second
To 2 crests in 1/2 seconds
To XXXXX

Freq
Is c/((0.75)/c + 1.5 - 1.5)
C/(arrived - sent time) = c/((distance fromto when sent / c + send time start) - send time start)
. (from t=1.5 to t=1.75).
Is wavelength^^^^^

Is distance^^^^^
With v = 0.5 c inward and x=1cs at t=0
The time for.crests to arrive at t=0-1,1-1.5,1.5-1.75
Are at
ARE^^^^^. For times sent =0,1,1.5
If emitted every 0.25... f0=4
at t=0,1,1.5. f'=for sent times at t=0.75-1
Where x=0.375-0.5. Crests arrive t=(1-0.375)/c to
0.5/c. So t arrive = 0.625 , 0.5. So f' = 1/0.125
For sent times t=1.25,1.5
Where x=0.5+0.5/4=0.5+0.25/2=0.5+0.125=0.625
To x=0.625+0.125=0.75
Crests arrive at t=(1-0.625)/c=0.375;(1-0.75)/c=0.25
f'=1/(0.375-0.25)=1/0.125. Arrive t = sent t + d/c
So tsent=0.75,1
Where x=0.375,0.5

Where tarrived=0.75+(1-0.375)/c;1+0.5/c= 0.75+0.625;1.5 = 1.38;1.5
Where f'=1/(1.5-1.38)=1/0.12
And tsent=1.25;1.5
Where x=0.625;0.75
Where tarrived=1.25+(1-0.625)/c;1.5+(1-0.75)/c
= 1.25+0.375;1.5+0.25 = 1.63;1.75
Where f'=1/(1.75-1.63)=1/0.12

Maybe for grav possible both v d because square law. So changes force. Can tell

Time for gravitational wave to arrive decreases
With inward velocity
So is force increased
So if grav waves generated at frequency 2
And time with inward ^^^^
Can send more waves in less time
Time bounce there back is 2d
1 wave / (2 d/c)
f(2d/c) = d^2.   f(2t) = (2t c/2)^2.   Time delay before sending next wave.   f(2d/c) = GM/d^2 =
Time to bounce there back = 2d/c
Time between first second send =
2d/c + amount of waves arriving proportional
To GM/d^2 - 2d/c
Amount of waves arriving proportionality = G M / d^2 t
t = (D/c)..... Prop = G M / t^2....
For every second of time to get there... Wait the total amount of seconds....
Choose target random....
Speed of gravity... Escape velocity...
Or.   For every second it's taking.   Wait another.....
If total there back 4 secs need 16. Not 8...
Time there times time back is total delay including the time there and back included
So   t wait after arrive = (time to * time back) - (time to + time back)
If (time to * time back) < (time to + time back)?
Units .... Need time...
If takes 1 smallest amount 1-2. What is 1-1?
If 2... 4-4...
If unitless fraction less time... Multiplication...
Split every 1 into 2 until positive and then divide by that many 2's....

1-2 => (2*2-2-2)/2 = 0. => (4*4-4-4)/4 = 2 =>
((x y)^2-2(x y))/y. y>1

If r < 1.   (x^2 - 2x) < 0
G M / (t/2)^2   or. G M / t^2.   t = ((d/c)^2 - 2(d/c))
G M / (....

If we knew that the time there times the time back
Would be less than the time it takes there and back
We'd send a new wave before the last arrived...

If in stead of secs use decisecs
For x=5 decisecs = 0.5 secs
0.25 - 1 = -0.75 secs after 1 sec
25 - 10 = 15 desisecs after 10 desisecs
Lim y->0 of ((xy)^2 – (xy)2)/y

https://www.wolframalpha.com/input/?i=z+%3D+((x*y)%5E2+%E2%80%93+(x*y)*2)%2Fy

= …

for every second... 1 s ….. wait total secs x s.... base unit 1..... it is like... taking a length....
.. ..x.... and making a square.... subtract length.... if each 1 s is a block...
put x blocks sideways and up.... and put blocks everywhere between...
then take away x blocks...
smallest possible block must be greater than smallest possible distance time
if each block is 1 desisec...
25 – 10 =
taking 2 x <<< blocks.... if only one block up and down x... do the blocks making the
up and down lines count?
Then... t delay = ((t there * t back + t there * t back) - t there – t back)

if true... then...

2 G M / d^2 = 2 G M / (t there * t back + t there * t back)....

smallest block must be smaller than area covered ….
how know time there back vs... wave records...
if put blocks of different size... total area subtracted from total area given is different... even though
total area given is same...
so the difference between the first area (t send 1) to the second area (t send 2)
is total given area...

((xy)^2 – (xy)2)/(y^2-2y)...

https://www.wolframalpha.com/input/?i=z+%3D+((x*y)%5E2+%E2%80%93+(x*y)*2)%2F(y%5E2+-+2*y)

z = ((x*y)^2 – (x*y)*2)/(y^2 – 2*y)

area of the blocks is time between sends...
if it takes ….. for each block waiting for return... add block.... for each 1 block waiting return...
grow by 1 up and sideways... and take away 2... 1=>1-2.... maybe... start count at 1?
1+1=>4-4=0 2+1=>9-6=3...

maybe just... take time to there... ie... x^2 – x...

so take 1 block but grow by 1 up and down before
1=>1-1=0....   2=>4-2=2...

does it need to send a new wave before the previous one's arrived?... if the time it's taking... is... less than.... block size.... or 2 blocks...

so start with 1 block when its sent... by the time it arrives with 1 block... subtract 1 block....

if it takes half a block.... cut up all the blocks in halves... and same area total …. and gives 0 half blocks... total area 0 blocks... but … after 0 blocks that means 2 waves per block...
if we then after halving the blocks... we get not 1 block total area... rather... quarter of a block... but we subtract half block...   if we used half blocks from the beginning... we would've started with a area of one half block... instead of …   if we used quarter blocks from the beginning... we would've gotten 4 quarter block and subtracted (half a block up and sideways to give 4 quarter blocks)   and subtracted 2 quarter blocks....

if the total time between sends (total area)... is less than the area from the time of arrival from first send (area sub)... then delay time is negative...

if the total time between sends (total area)... is less than the time of arrival from first send (area sub)... then delay time is negative... where would the delay have to negative or arrival time greater than total time between sends....   starting sending out faster than arriving time... adjust force GM... on next....   or adjust G M by time of wave records....   so wave counts time itself... and keeps track of emitter position and velocity   or G M for gravity   not light …..   and each g wave is not consumed.... where does it stop...

intensity of light is like square proportional like force gravity distance   amplitude.... detect changes in amplitude to detect velocity and calculate distance...

use with f'/f to set velocity and get distance...

where does wave stop know that no more particles ahead... if universe is repeating? Itself meets?

Complex log power number   log(base sqrt(-1))(x)   log10(sqrt(-1))   log(base sqrt(-1))(sqrt(-1))
x ^ sqrt(-1)   sqrt(-1) ^ sqrt(-1)

NEW
I had read in the Time-Life Science Library book "Man And Space" about the possibility of a very, very ambitious mission in which an astronaut would go to a galaxy 200 million light-years away, with the spacecraft simply being accelerated at 1 g during the whole time (in the direction of the galaxy for half of a leg, then in the other direction for the other half), and thus going for the most part at nearly the speed of light as observed from the Milky Way, with the net effect that the astronaut would experience about 26 years of time pass by for each leg. This astronaut would start his trip by observing that galaxy as being 200 million light-years away, but then reach the galaxy in only 26 years, thus he would conclude that the galaxy appears to be moving at about 8 times the speed of light. What gives?

It appears to you that you can accelerate indefinitely to any speed even faster than light but light will always adjust and have speed of light   and to earth you will be faster than light   and it is only the relation of the current observer to the speed of light that cannot change... speed of light is always c relative to us

I think you have length contraction wrong. To an observer in the rocket the distance between the galaxies is length contracted, sufficiently so that 26 years is enough time for the destination galaxy to reach the rocket.””

the space in front would be extended, you would be contracted in front.... gamma front < 1... therefore light leaving you minus your speed, will travel a greater absolute distance... that is, the separation will grow faster for the same amount of time, when it is divided by gamma... if you travel at 2c   gamma front = -1.... things in front will appear behind.... ie their attraction.... you wont actually achieve 2c due to scaling of velocity.... seemingly... every time v = c achieved it seems its scaled down again if instantaneous infinitesimal gamma... if you do have 2c... your time in front “” will be scaled by -1... but behind by …. light from front arriving going back... scaled by back gamma even though from front because   if v = 0.5 c   and front gamma = 0.5   light leaving separation is (1-0.5)/0.5 = 1   and if toward then   (1+0.5)/0.5 = 2.25.... so if using gamma back = 1.5   1.5/1.5 = 1   so for v = 2c light coming in from front   scaled by backward gamma   is 3 = gamma backward   is (1- -2)/3 = 1

objects going inward from front scaled by backward gamma? If object in front corresponds with light it must also be scaled by gamma backward   how does acceleration scale...   probably away in front...

complex backward and forward gamma?

X1^2 – (ct1)^2 = x2^2 – (ct2)^2
says that the separation between the distance the object travelled and the amount light would have travelled   is conserved between frames....
but... meters should be sqrt(x1^2).... and really sqrt(x1^2 + y1^2 + z1^2)....   x1 – c t1 = x2 – c t2.... if sqrt(x1^2 …. - t1^2)....   as if time is a dimension.... is it as if …. x and y are on paper making a triangle and at the x,y point it is if t c is going back in the direction of origin..... sqrt(x^2 + y^2 - (vec(x,y)/mag(vec(x,y)) * c t) ^2?)   then shouldn't be ^2....   rather it is seperation from origin to the general direction of v....   sqrt((vec(x,y)/mag(vec(x,y)) * c t) ^2? - x^2 - y^2) ….. what is conserved then between frames.... in the frame where e2 moves from 1 to 2 in front of e1 x, in the span

of t 1 to 2...

little wave in small wave so discriminator circuit 123123 => +1,-2,+1...-2...? cancel out big?^^^

crest(x,f) = - crest(x+(c/f)/2,f) = trough(x,f)... crest(x,f) = amplitude(x * (c/f), f)............. amplitude(x * (c/fmin), all) = integral from f=fmin to fmax of amplitude(x * (c/fmin) / 2^(log2(f/fmin)) , f)

amplitude(x * (c/fmin), all) = integral from f=fmin to fmax of amplitude(x * (c/fmin) , f)

f(n) = fmin * 2^n

x = crest number in series …... x = t f   x * (c/fmin) = length in meters etc of path along wave

123123 = wavelength 3 getting wavelength 2... not wave.... if 12341234 => +1,+1,-3.... wave explosion....

loop shape
gives position if... acceleration was such that at that time up to that point it was constant... and exactly the one up to that point, given by that current position, regardless of accumulation of position due to acceleration... x = x0 + v0 t + ½ a t^2 =   x0 + v0 t + ½ (G M / (x – D)^2) t^2

https://www.wolframalpha.com/input/?i=x+%3D+y+*+(sqrt(+2+%2F+(2+-+x)+))
x = y * (sqrt(2 / (2 - x))) = t * (sqrt(2 G M / d))

complex values … imaginary values... eg ^^^   should be graphed with +sqrt(-1) as negative... for continuity with graph, because they will give negative... and -sqrt(-1) as positive going up y

Hello everyone.
Below are two problems I have been thinking about lately.
Let’s consider two cases:

1. we have a spaceship surronded by an utter void - nothing outside which the spaceship’s pilot

could refer to. The pilot (in his robotic body, allowing him to withstand enormous G-forces) turns on engines and starts accelerating at 100,000g and after few minutes reaches 270,000km/s (0.9c) - or is he? If there is no reference frame is the spaceship moving at all since speed is relative?

2. we have two spaceships and nothing else, as described above. Spaceship A starts accelerating and after some time it reaches 0.9c (acceleration phase 1), so it is moving 270,000km/s with relation to the spaceship B. Now spaceship B turns on its engines and starts accelerating at even higher rate than previously spaceship A and it is doing that as long until it catches up with the first spaceship and then it kill its thrusters; now the ships are moving next to each other with the same speed - their relative speed is equal to 0. Next, the spaceship A turns on its engines and again starts accelerating to 0.9c (acceleration phase 2) and eventually it is moving again at 270,000km/s with relation to the spaceship B.

The question - would the energy expenses on acceleration to the same speed be higher during one of the phases; which one? Or would they be equal? Besides, what about relativistic masses of the spaceships? Is mass of the spaceship A bigger after acceleration to 0.9c first phase than before that phase? Is it even bigger after acceleration during phase 2?

assuming B stops accelerating when reach's A's speed, or reaches A, then decelerates to A's speed:

v = 0.9
forward gamma = 1 – 0.9 = 0.1
v' = 0.09

a' = 0.09
v'2 = 0.18
forward gamma 2 = 1 – 0.82 = 0.18
v'2' = 0.18 * (0.18 / 0.1) = 0.18 * 1.8 = 0.324

v'2' in forward gamma 1 frame = 0.324 * (0.1 / 0.18) = 0.324 / 0.555... = 0.5832... ?
v'2' in forward gamma 1 frame = (0.324 – 0.18) * (0.1 / 0.18) = 0.144 / 0.555... = 0.259... … is SCALED by forward gamma 1, but in absolute”” frame... so... 0.144 / 0.1 / 0.555... = 2.59 ??

v'2' in gamma 2 frame * gamma 1 frame – v'!!!! = must 0.9....
v'2' in gamma 2 frame * gamma 1 frame / gamma 2 frame – v'!!!! = must 0.9....

0.324 * 0.1 / 0.18 – 0.9 = -0.72 ???

(v'2' in gamma 2 frame – v' in gamma 1 frame * gamma 2 / gamma 1) / gamma 2 = 0.9???
(0.324 – 0.09 ….

0.324 * 0.1 / 0.18 – 0.09 !!!! = 0.09...   0.09 / gamma 1 = 0.9!!! ^^^
(v'2' in gamma 2 frame * gamma 1 frame / gamma 2 frame – v') / gamma 1 !!!! = must 0.9....

(0.324 – 0.09 * 0.18

forward gamma 2 = 1 – 0.18!!! = 0.82!!!

v'2' = 0.18 * (0.82 / 0.1) = 0.18 * 8.2 = 1.476 ????
v'2' = 0.18 * 0.82 = 0.1476??? wrong <

1.476 / 0.82 = 1.8
in absolute space, unscaled

1.476
in absolute space, scaled

(1.476 – 0.9 * 0.82 / 0.1

a' = 0.09
a = 0.09
v = 0.9 = v' / 0.1 = 0.09 / 0.1
v'2 = 0.... wrong
v2 = v' / gamma 1 + a = 0.9 + 0.9 = 1.8 !!
forward gamma 2 = 1 – 1.8 = -0.8
v'2' = 1.8 * -0.8 = -1.44

(-1.44 * 0.1 / -0.8 - 0.09) / 0.1 = (0.18 – 0.09)/0.1 = (0.09)/0.1 = 0.9 ^^^^
(v'2' in gamma 2 frame * gamma 1 frame / gamma 2 frame – v') / gamma 1 !!!! = must 0.9....

if gamma'd... distance shouldn't increase.... should remain same... and will exceed speed of light in approaching galaxy but... speed of light relative to you will still be c..... light that is already D away, should grow D / gamma but... connections distances kept to everything?>.... everybody perceives absolute velocity, or rather absolute with their gamma? Shouldn't grow D / gamma ^^^?? …... if speed is 0.5 and original D to light coming in in front is 1... to outsider... time it will take to reach light's position is is t normal time = 1 / 0.5 = 2 and to outsider viewing the mover with the scaled absolute velocity.... t = (1/0.5) / (0.5) = 2 / 0.5 = 4... so to outside observer the speed 0.5 will be 0.25 in apparent absolute terms... even though it appears it has to travel a longer distance now.... for the mover ….. it is actually time that will be dilated... how if at v > c when gamma forward becomes < 0... a particle that was ahead, suddenly becomes behind... the velocity and acceleration will all be scaled so it is behind.... so its current acceleration there will become negative, its future acceleration toward that point will become negative, and its current velocity in that direction will become negative... but that means it will get farther away, not closer.... if the particle is co-moving, it will repulse in the opposite direction too, and for all intents and purposes, that bubble that is moving at v > c, will be reversed, with the laws of physics and forces, with the particles having switched places, but continuing apparently in the same directions to itself... in relation to the outside, a particle that is at rest behind, becomes at rest on the opposite direction, and moving away in that opposite direction....

if v forward = 2 c   forward gamma = -1   backward gamma = 3   particle ahead x = 1 becomes x' = -1   particle behind x = -1 becomes   x = -3   acceleration to particle ahead a = 1 becomes a' = -1   acceleration to particle behind a = -1 becomes a' = -3   repulsion from particle ahead a = -1 becomes.... a' = a * backward gamma = -3 ?   repulsion from particle behind a = +1 becomes a' = a * forward gamma = -1

can accelerate for 1+ year at 1 g.... to reach speed of light and beyond... gravity will change.... from a to a' in relation to unaccelerated objects, in perspective of the accelerated... in orbit trajectory through solar system... to travel through time.... calculated trajectory with onboard computer adjustments thrusters...

Moon radius 1/4 earth
Moon gravity 1/6

Radius to volume to mass to gravity at surface

light acceleration camera... like gravity but uses differences in light intensity to detect distance and velocity relative to sun etc... because with acceleration of gravity uniform can't tell changes and strength unless very sensitive and or over large distance... in free fall... ie detect the difference of two balls on a string eg that are 1 solar distance apart above the earth... and detect stretching or blah … and use to calc navigate trajectory 1 g acceleration year...

Rather the only opposite forces would be between the bubble travelling over light speed and the rest of space at rest

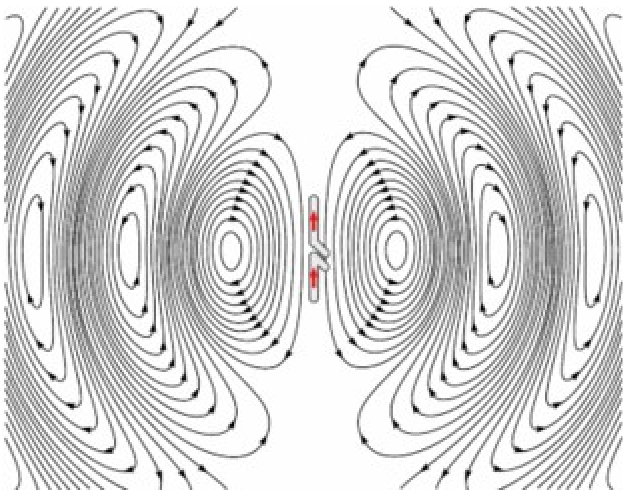
Though in a block hole where the gravitational dilation is in all directions (even though escape velocity is directly away) there may be opposite forces between all particles and fherefore opposite time

Time it takes INCREASES (t / gamma) for the moving observer forward:

Δt′=Δt / sqrt(1−v^2 / c^2)

if we have sqrt(1-1) and therefor delta t' = delta t / 0 = inf we can instead use D'=D/gamma... rather v'=v gamma and size length x' = x gamma   to get something usable.... v' = v 0 = 0...

gravitational wave frequency depends on relative movement of source to absorber and grav wave strength depends on distance and mass of emitter either way... it is either more crests per time (higher frequency) oooor more crests per time (more emitters overlaid on top of each other, giving greater amplitude, assuming it can be absorbed)... but what determines if it can be absorbed or not is probably the frequency... more crests of a different frequency to give a greater amount of crests of a frequency that can't be absorbed... probably will not result in absorbtion... and the difference is that the overall signal would be different, as explained in the equations of the discriminator of band-pass circuit algorithm... and in the case of the stacked waves it would give a crescending or generally rising crest that did increase with peaks at the required frequency, but would be sloped more in general and would have longer wavelength decays for the individual peaks and for a shorter wavelength... the crests can be spaced out more but the crests and troughs will still have shorter signatures than a frequency wave of the same distribution of crests.... crests and troughs together give the wavelength any slight change in electron velocity leads to a wave so waves are continuous radio wave space



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because acceleration of gravity and electric of self velocity doesn't match always emitting gravity waves

light contours map
like above
imagine two electrons emitting light waves
like a height map with contours
where a certain height or combined wave amplitude gives a contour
eg where 0.9 turns to 1
when there's two electrons there would be two contours that are removed farther back in between due to the addition of amplitudes
like the manifolds generated for acceleration etc spaces... same way here

with light wave acceleration camera can tell velocity of particle and body
from frequency ie redshift blueshift
and change in velocity or instant distance and acceleration by changes in strength amplitudes

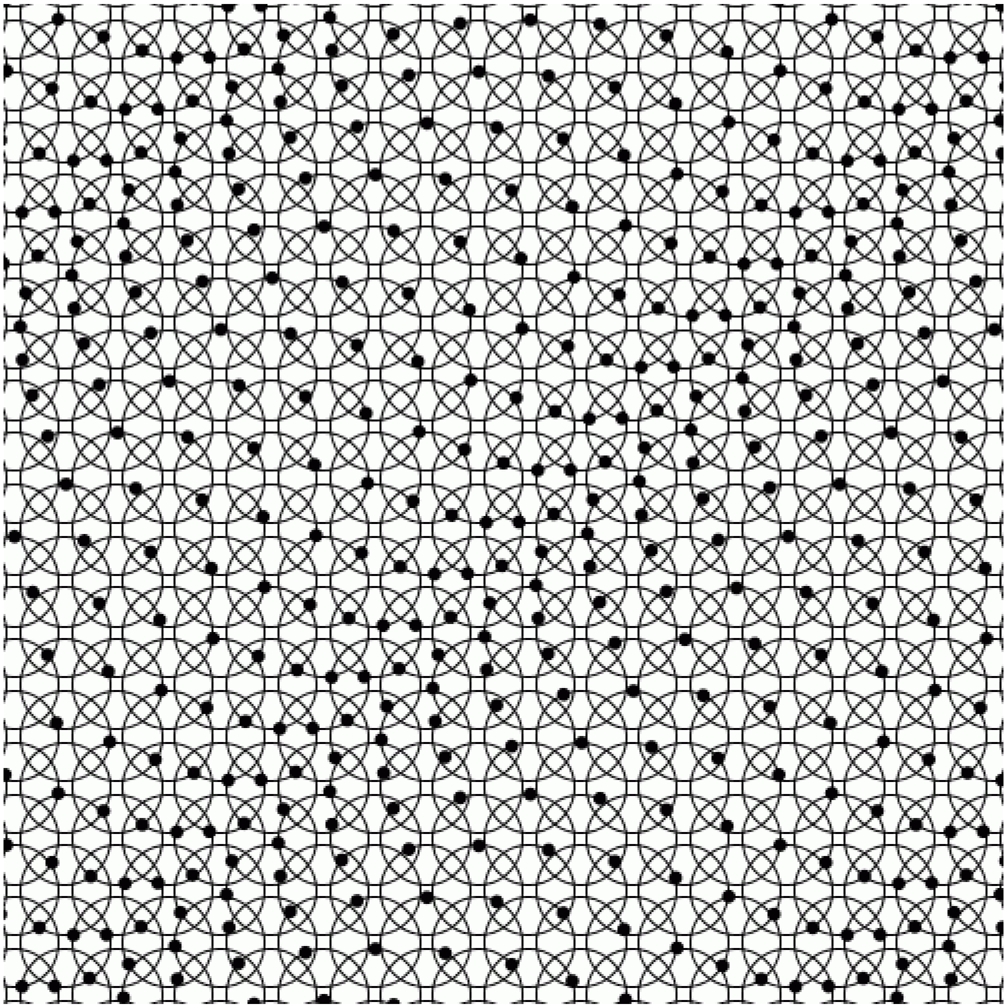
if v > c then is it moving faster than light and light behind therefore is unreachable
if the forward gamma is = -1 then what happens to v' forward who sees the v' then

v' is the scaled velocity in relation to the scaled c'.... (1 – 2)/-1 = -1 + 2 = -1 forward light going back ie backward gamma (1 + 2) / 3 = 1 forward gamma ie light going forward from back the result is light no.... -1 is light going forward IE FORWARD GAMMA so light going forward from the back would recede in front and never arrive and 1 is backward gamma and so light arriving at the front would arrive in the front at the normal speed........... no (1 – 2)/-1 = 1.... but forward gamma = -1 so as said the light going forward from the back would now recede in the back and never arrive even if they originate going forward in the original direction though now it seems the world would appear to be flipped in relation to the non-moving space.... and backward gamma is 3 so light travels …. normally in the back..... but is shorter wavelength by a factor of 3 ie light going back thus backward gamma going from front to back regardless of origin in front or back

A certain frequency that is absorbed by an electron or that caused an electron ejection
Works with the orbital mechanics of the electron
Eg a 4%2=0 but 5%4=1
Also a wave that is re emitted or passes through or is reflected also works with the orbital mechanics

Timing and orbital mechanics

Light travels much faster than electrons so the orbital deceleration and acceleration waves will be smoothed over by electrons together with the same general vibration or current to give the same wave in the same general area or antenna to give a higher amplitude of the same crest



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this may also explain electron double-slit diffraction patterns^^^

for geodesic warp view and gwv with velocity, using a grid of starting points around the particle in question, going in the direction of its starting velocity, and then either having all the same changes in the relative changes in the path velocity position, or their own geodesic^^^^

the question mark in the term – vy? Is to indicate that the necessity or correctness of the term are uncertain^^^^

or if geodesic view, don't have grid of nearby velocities particles, but all from perspective of single particle.... and eg everything in between points along trajectory is interpolated... in invariant way... or eg an “bending” at the turn of velocity path increments of everything else... so eg... bend 15 degrees down, then future point at that bent velocity is relation to the surrounding geometry, up to the points behind the plane formed by the line of the previous velocity vector, with the plane surface at the point where the velocity change, made infinitesimally continuous.... and therefore future points along the velocity trajectory are layers further of new layers of planes, that define boundaries of same, where the previous plane's spaces are always cut by the next planes, or other way... and a continuous velocity is calculated so that the actual velocities in the trajectory are used to scale the geometry space segments in between planes ^^^^ or rather, new planes projecting on to the fronts of previous planes succumb to them, not including their space... if the back of the new plane is toward the front of the previous plane... and if in a circle orbit... preserve distances sideways and relatively... and otherwise preserve a straight line trajectory by warping the sideways geometry... eg by bilinear interpolation (trilinear?) in between with increasing distance... and preserve constancy of speed by scaling segments of the trajectory....

Also add: to grav curvature
Even acceleration constant eg in the back of a truck
Causes the local "up" to change shift to the front of the truck
A weight hanging from something will swing back to the back of the truck
A helium balloon will swing to the front of the truck
The air distribution will change so that hotter particles are in the front
The same can be seen with a pool of water if it is accelerated
As it will shift to the back in a way with it's flat surface up to where the new up is

Imagine: gravity and acceleration are the same. It is not just saying that the gravity pulling you down is the acceleration you experience. Here we are talking about proper acceleration, the one of the Earth pushing up against you. Imagine: the Earth's constant acceleration up against you is the same thing as everything in the back of the truck being accelerated forward. It is as if they are on an inclined plane, if the acceleration continues constantly to accelerate them to higher and higher speed.

...creating an "up" direction

"$E^2 = (m c^2)^2 + (p c)^2$

one can *consistently* and *convincingly* explain using special relativity,

· why objects with (non-zero) mass have rest energy $E_0 = m c^2$ ($p = 0$); "

$p = m v$

why objects with zero mass ($m = 0$), like photons, still have energy;
e.g., where sunburn comes from, why laser cutting works, why “tractor beam” experiments work (no kidding), and why solar sails (Breakthrough StarShot) would work;

→ calculate frequency or energy of photon / wave based on deceleration of electron given its mass and change in velocity

p c = m v c = kg m/s m/s = kg m m/s^2
m c^2 = kg m/s m/s

alternatively... isn't the energy or frequency supposed to be such that... it is like (c+v)/lam where v is the change in velocity? Although that would assume we already have some lambda to work with...

If the other side is moving closer, into the shining light, it would seem they are travelling by 1c + 0.9c or (1c + 0.9c)/(1 + 0.9c * 1c / c^2) = 1c, so their perceived time rate looking at the outside world would have to increase so the light seems to go slower in their seconds.

Velocity addition equation would also work as well as ((c+v)/c) to give a dilation... where gamma = (1 + v c / c^2) = (1 + v / c) = same = ((c + v)/c)

what is the incident frequency based on emitted frequency? Emitted f = E / h = (mass electron * delta v * c) / h a head-on collision of an absorbing electron that is in the same direction as the emitter was heading, gives a resulting incident frequency =~ ^^use more accurate seconds-sent,seconds-recieved,1,2 to get a better value^^^ =~ (c + vemit + vabsorber) / base wavelength

No such thing as max whitehole... like r=0 (ie... there will be infinite repulsion at r=0, no limit) …. particle or blackhole Where Y = 1 / X → infinity as X → infinity (if X or accel → infinity …. if in white hole 1 / X → infinity if acceleration decreases to 0... because... it is negative acceleration..... if we scaled the maximum attraction as Y = 1 / X → 0 as X → infinity and scale the Y = 1 / X → infinity of white hole of maximum repulsion, such that.... X max attraction → infinity and X max repulsion = X white hole – X max white hole repulsion → 0... ^^^ down here) ie Y = 1 / (KA + X) where X + KA > 0
wrongX right!X wrong : X = AE = K q1 q2 / D^2 M1 → infinity for D → 0
Xmin → - infinity Xmin + KA → 0
Xmin < 0

^^^ G M1 M2 / D^2 M1 = G M2 / D^2 = AG M2 < 0 AG → - infinity D → 0

AE = FE / M1 q1 > 0 q2 > 0 AG < 0
= - K q1 q2 / M1 AE12 < 0 M1 > 0

[edit: possible to make anti-G a maximum sheet size, and G sheet → 0 for G → infinity at r = 0? as G → - infinity X → - infinity make to X → 1 / YAGmax → G sheet max? Or 1 / (X + K) → max AG sheet size for X → - infinity and in no case X+K = 0 ? ^^^down here

(2X / (X^2)) or (2X / (1 + X^2) second gives 0 for a = - infinity and a = +infinity and gives 0 for a = 0... maybe (2X / (1 + X^2) + 1) gives or (1 / (1 + 2X / (1 + X^2))) last gives 1 for a = 0 and 0 for a = -inf, +inf and for a = 0.5 gives (1 / (1 + 1/1.25)) = 1 / 1.8 = 0.555... and for a = -0.5 gives -0.555.... and for a = 0.8 gives (1 / (1 + 1.6/1.64)) = 1 / 1.9756... = 0.50617... so same general principle as before but now it scales between 0 and a maximum sheet size for the range negative inf to + inf rather, it will scale if Y = (1 - (1 / (1 + 2X / (1 + X^2))))]

Or maybe. If x from neg inf to pos INF
With y from neg ymax to pos ymax
Then y prime = y + ymax

For y = (x/|x|) * 1/(1 + |x|). ^^^^^. Where x from neg inf to pos INF. Would give y from neg ymax to pos ymax

(1-1/(1+abs(x)))*(abs(x)/x) = y

Y = (2x / (1 + x^2))
Y = (2x / (1 + abs(x))^2) * (abs(x)/x)

Only ones that work so far

(1-(abs(x)/x)*x/(1+abs(x)^2/2^2)) = y
(1-1/(1+abs(x)))*(abs(x)/x) = y

Rather
y=(x/(1+abs(x)^2/2^2)), (not quite<<<)
y=(1-1/(1+abs(x)))*(abs(x)/x),
y=((abs(x)/x)*1/(1+abs(x)^2) – abs(x)/x)

last =>
y=((-abs(x)/x)*1/(1+abs(x)^2) + abs(x)/x)

maybe just cap at certain max Y, if can, and display unscaled Y to give invariant intersection touches, 360...

y=((-abs(x)/x)*1/(1+abs(x)^2) + abs(x)/x) = |x|^3 / (x |x|^2 + x)
y=(1-1/(1+abs(x)))*(abs(x)/x) = |x|^2 / (x |x| + x)??

y = (1 - (1 / (1 + 2*x / (1 + x^2)))),
y = (1 / (1 + 2*x / (1 + x^2))),
y = (1 + 2*x / (1 + x^2)),
y = (1 + x^2)

y = (1 + x^2),
y = (1 + 1 / (1 + x^2)),
y = (1 / (1 + 1 / (1 + x^2))),
y = (1 - (1 / (1 + 1 / (1 + x^2))))

y = (1 - (1 / (1 + 1 / (1 + x^2)))) * (|x|/x)!

y = (((1 / (1 + 1 / (1 + x^2)))) - 0.5) * sign(x),
y = (1-1/(1+abs(x)))*(abs(x)/x),
y = ((-abs(x)/x)*1/(1+abs(x)^2) + abs(x)/x)

y = (((1 / (1 + 1 / (1 + x^2)))) - 0.5) * sign(x) * 2 = (x^2 sign(x)) / (x^2 + 2)
y = (1-1/(1+abs(x)))*(sign(x)) = (|x| sign(x)) / (|x| + 1)
y = (-(sign(x))*1/(1+abs(x)^2) + 1*sign(x)) = (|x|^2 sign(x)) / (|x|^2 + 1)
y = (-(sign(x))*1/(1+abs(x)^3) + 1*sign(x)) =(|x|^3 sign(x)) / (|x|^3 + 1)

2,3,4 intersect at (0.5,1), while 1 doesn't 3,4 are concave at 0>=x>=1 while 2 is convex 2 is convex both before and after x=1 3 is above 4 before x=1 and after x=1, 4 is above 1,2 intersect at x=2..... if using 1b version: ((2*x)^2 sign(x)) / ((2*x)^2 + 2) = (((1 / (1 + 1 / (1 + (2*x)^2)))) - 0.5) * sign(x) * 2 then 1b,2 intersect at x=0.5 if using (((1 / (1 + 1 / (1 + (1.5*x)^2)))) - 0.5) * sign(x) * 2 version 1c then almost identical to 3 but still intersects at x=0 and approaches y=1 at x → infinity

r1 has the lowest growth (approaches ymax slowest), and smoothest, most even distribution. However, the 1 approaches flatness from both sides of x as y → 0, which may be desirable for an in-between sheet size for accelerations that approach zero, and quicker growth for position and negative acceleration, that also approach fixed sizes (0, and ymax) slower and more level as the magnitude increase. 2 is the second best, in that it doesn't level at x → 0 and y → 0, but gives a smooth transition that doesn't ramp up to speed . And after x=2, #1 overtakes #2, and #2 is the lowest and gives a second best distribution.

Electromagnetic diffraction or the way a flashlight focuses a light wave into a cone, is, because the frequency depends on the velocity of the emitter, both particle and general body, perhaps the waves going forward in a cone have a certain blue-shift frequency forward, that is in tune with the air that causes the air to only pass it on forward. If a force is too strong for example in that direction, it may cause a rapid deceleration if an electron ventures too far in that direction, either from the pull of the nucleus, or repulsion from another electron, causing another blue-shifted electron in the same direction.

If it is a certain high-frequency ultraviolet or gamma ray frequency, it may cause the electron to escape the orbit and enter another nucleus as it may be exactly the right amount of energy to accelerate the electron a certain distance at a certain phase of its orbit. It may be tuned to the electron's vibrational, rotational cycle.

There is no force at exactly r=0 though.   Or else on approach inside it gains a greater velocity, with initial, such that on the other side it would escape to some small distance.

v' = v gamma
a' = a gamma
t' = t gamma
x' = x + v' t + a' t^2
x' = x + v t' + a t'^2   <<-- no wrong ^2

x = (x' - v' t - a' t^2) / gamma

final

sgn(x) = d|x|/dx   eg x = 1,   d|x|/dx =   sgn(x) = [x / (|x| + 1)] - [-x / (|-x| + 1)]   eg x = 1,   => [1 / 2 + 1 / 2 = 1]   eg x = -1   =>   [-1 / 2 – 1 / 2 = -1]   eg x = -1/2   => [-0.5 / 1.5 – 0.5 / 1.5 = -0.66...]

d|x|/dx = 1/......... | …........

gravity camera in real life would require great distances, like a string between two balls apart a length of a solar radius above the earth, for example, but using or with very sensitive accelerometers/forcemeters, but using fiduciary markers or distances to stellar objects ascertained visually and using radio or other signals and timing or red-shift, using eg the Earth, Moon, and/or Sun, or constellations, it is possible to track the trajectory and to possibly construct a gravity volume, as using a gradient in the attraction and with adjusted propulsion   but it is possible to see what it would look like using computers

if gravitational dilation was only up away in the direction of escape velocity, it appears gravitational lensing would not have been observed, as it would have only affected light in the direction of gravity or away.

Escape vel is the coordinate(?) Vel needed for you to coordinafely(?) Properly(?) Stand still. Or rather move at a constant velocity (coordinate) away from the gravity without needing any Accel (proper?) Adjustments (where a proper acceleration might still be an acceleration even if it results in you standing still coordinately, because the pull of the gravity is not proper acceleration but only coordinate) (where falling in at free fall speed.. probably... Or negative escape velocity at that point in space and time, would be proper standing still with respect to the gravity source)

Even though gravitational dilation is in every direction for an affected object, perhaps any proper velocity (as in, velocity opposite to the pull of gravity, even when the result coordinate position doesn't change) adds to the velocity dilation factor, even though it results in no coordinate change. That would mean:

up gamma = (c – (up vy + up vesc)) / c

which is different from

γ = (c – (v + (2 G M / r) – vy?) / c ^^   actually only different by -vy?.

light would then have a dilation greater depending on vy, and v in general. If we apply dilation to light, travelling at c, time rate grows to 0, so it travels instantly. And distances are effectively 0.

Proper einsteinian relativistic
Vs
Gravitational or Newtonian
Accel

proper: accel contrary to natural gravity pull
gravitational: pull of gravity accel
coordinate accel: the net acceleration leading to change in coordinates, or perhaps the proper acceleration in cases where there is an opposite between proper and coordinate, with little, no, or some change in position, or more correctly, it is the gravitational acceleration that leads to changes in coordinates
newtonian: both proper and gravitational^^

G ((4 pi r^2) * DM) / r^2 = G 4 pi DM   radius to volume to mass to gravity acceleration at r

the light waves are continuous and the crest-trough are the result of changes in the velocity of an electron as it orbits. Any change in its velocity is a new wave segment, and in-between, we can treat the wave segments as interpolated. Does that then mean that the frequency, given by the velocity and direction (which is directional and depends on the red-shift / blue-shift to give the frequency in relation to the receiver,) has a crest or blue-shift if it is in the direction of the absorber, the more so it is? That is, a crest is dependent on the direction of the phase and direction of the electron emitting it, and the frequency is then a matter of the orbital period of the electron? Or is the frequency and crests and troughs a function of the velocity only and direction, and not related to the orbital period? If the frequency is a function of the energy content of the velocity and mass of the electron, it appears that crests and troughs would not be in sink with the orbital period of an electron, and otherwise would have not been concentric circles that radiate, but spiraling crests and troughs that depend on the orbital period and phase. That depends on whether we believe an approaching electron that is decelerated means a crest at that moment in time, or a blue-shift. Because apparently an electron cannot determine the amplitude of a wave, it appears it should not dictate the heights or crests, and therefore only frequency and thus blue-shift. If electrons with greater velocity decelerated meant a greater amplitude, we could eject electrons from any metal by simply increasing the intensity of light and not frequency, and thus frequency would be determined by the coincidence of multiple quantity of electrons with the same amplitude, paradoxically.

A black hole event horizon would form before a singularity. That is, the time when a heavy stellar object becomes heavy enough for escape velocity to exceed the speed of light at the surface, is before the time that the electric repulsive forces break down under the gravitational pull of the whole object on itself. If the singularity forms before the event horizon, we should expect to be able to see such point-like dense stellar anomalies and observe gravitational lensing, but no trapping of light.

“”Assuming that the equivalence principle holds,[51] gravity influences the passage of time.””

If the influence on the passage of time is like a velocity, where the velocity at that place is the escape velocity due to gravity, then what happens when the upward velocity is exactly equal to the escape velocity, resulting in a constant speed drift into outer space (although then the velocity would be greater then escape velocity). Then is the effective velocity, escape velocity and actual velocity, canceled out, giving no dilation effect? Although afterward it would be over 0. Equivalence principle, intertial motion is the same as... “”According to Newton's law of gravity, and independently verified by experiments such as that of Eötvös and its successors (see Eötvös experiment), there is a universality of free fall (also known as the weak equivalence principle, or the universal equality of inertial and passive-gravitational mass)”” It appears that SOME actual velocity, positive or negative, should be able to cancel out the gravitational escape velocity effect, as it is able to cancel out actual velocity's dilation effect.

Moving away with vesc coordinate velocity is adding vesc dilation
Not moving is subject to vesc dilation
And moving inward at vesc cancels out dilation of gravity

Although,
The effect f a different gamma for x and y
Would give a different time dilation for them
And if before in the time that it took one electron
To go from top to bottom
Another would go from left to right
They would now not be synchronized
And the chemistry may be different
And waves might not have the same effects
If they depended on the passing on of
Momentum in tightly coupled
And synchronized electron orbits.
The total effect on time might be calculated
By the change in total orbit size or orbit
And thus the length of a circle or area of a sphere
Using those three sizes or a length along the sphere, going from top, down on the right to the bottom,

then up half way on the front, left... Or half way across each time and a turn right until exactly equal parts of the x y and z orbit circumference are taken to give length and thus time duration .

Do experiment
Not only sideways movement of nucleus
And electric repulsion from a side or two
But also relative compression of an x y or z axis effect on timing and chemistry etc

And determine timing whatever implications of different ways of combing effect of velocity and gravity dilation in black hole
And use satellite or hafele or other airplane dilation time details data to determine likely proper way of combing those dilations

But not only would velocity decrease by dilation but also gravity Accel etc but because the dilation is symmetric having a back and a front side that add up to one the asymmetry between axes might be cancelled out

Regardless of the velocities
With two electrons moving apart at 11c
A light wave from one will reach the other in time D/c. Even if D = 1 + 11c t. Then at t=0.... If we're away moving at 11c from the fastest Galaxy yet light reaches us.... In terms if lights speed was c' = c + 11c. Then if in our v perspective ie perspective of every other point it has to reach. Time to reach us would be (1 + 11c t - (c + 11c) t) = 0. And crests frequency would just have to be adjusted... Solve for t^^^^. So the time it takes light to reach us is always D/c' with c' in our receiving perspective... In their perspective then. The light they send... Travels D/(c + v) where v is their velocity away... Or our away velocity from them...

A lidar would then measure not 2d/c but
... 2d/c... And timing would be... (Approximately still 2d/c with v<<c much less then)... And timing would be the same. Because the distances calculated are the same almost. Even though the times to traverse that distance is slightly different with added velocity. And all that matters for lidar speed measurement is the difference in distance measurements between subsequent pulses.

So there is no single light wave then but is all dependent on the receiver... Like the acceleration space of electric forces depending on the test particle in question that is in it.

So for comparison
It takes light d/c to reach a stationary target

And $d/(c+v)$ for a v velocity target away
So two targets equally far away at time of reception will have a light arrive faster at the faster away moving Target than the still or slower target
And targets that are moving in toward the light
Will have an even lower speed of reception and longer wait
The law thus works in the opposite direction but not fully.. ie moving away causes the reception time to decrease a little
And the movement in a certain direction causes the velocity to contract in that direction and acceleration in the opposite direction to increase with respect to still or different velocity particles

The frequency should then be adjusted such
That for a galaxy receding at 11c
The frequency should have a redshift of 11c
Though there is no innate concept of frequency as it simply arises out of crest time difference
So the crests should be compressed or stretched out based on the redshift
So for 11c in the time it would have taken 1 crest only 1/12 would have arrived so there is a pile up of crests..... Yet if it only takes $D/(1c + 11c)$ to cross the distance... It only takes an amount of time dependent on the distance of the emitter away from us, not THEIR relative velocities... so pile up..... Would have to be evenly distributed based on the velocity at those times and distances and current velocity and distance of that crest with respect to receiver...

Because if you were approaching an emitter at $v = 2c$ then $c' = c - 2c = -c$. So although that wavefronts would never reach you, because light expands in a radiant circle, it will still reach you at $c' = c$ but now with redshift instead of blueshift, and also because it may be the opposite face of the light wave it would have taken a different path through space with different gravitational refraction. Or maybe it would reach you from the opposite side of the emitter with blueshift and velocity of approach of c (with your relative velocity being 0.)

But because the system evolves with a single universal global time variable t
If the wave is absorbed by a single particle at one place we know it does not get absorbed by some other particle regardless of velocities and other considerations , so in THIs sense there is only one light wave.

The time to reach a target of lidar is $d/(c + v_{target}) + d/c$.... Though the effect should be negligible with $v_{target} \ll c$.

Rather $2d/(c + v)$ because in both cases the target and you are moving away at v

For lakes lidar. d/c + d/(c+v). For emitter-only theory of light speed. Because on shooting to target it moves at c relative to you and on the way back it moves at c+v with effect of car. And in receiver-only theory of light speed, in both cases the target is moving away at v.

So for each light wave segment or crest we must keep track of a distance of the crest from the target

Maybe the c' is only up to the point such that c' > v.... The emitter in receiver only theory would in the first case observe the light to radiate at v+c but the receiver at c.... or maybe you're flipped backward if you're moving over c and get stretched out so that the back end will still receive the light signals.... And maybe v' = v gamma (t / gamma) + a(d/gamma) (t / gamma)^2 gamma = v + a(d) t^2 gamma...

In the triangle
What is the v'. It is the movers effective v to the world (v') that the mover sees as the unprimed v true with the effect of time dilation t'... to be the same true v in his time, yet giving a c - v separation of c... That is c/gamma - v/gamma = c... Where gamma is the time dilation.... Or length contraction so in the time it takes for .... Or length contraction so it appears to mover that light is moving full c (even though an outsider would observer the mover to be moving).... And all the objects particles moving at v must behave the same with all the same forces proportionally ... All that's required is that the length be contracted sizex*gamma and thus distance increased D/gamma and the time it takes to traverse that distance to be be t slower in that direction by t * gamma where t is the normal true time for traversal of D/gamma (not just D true).... So v' from the perspective of the outsider is v' = v * (((D/gamma)/v)*gamma)/t.... v' would still be same to the outsider... Only t would change.... So what is effect of t'.... How do we make it go slower in time in the direction of motion without affecting chemistry and axes symmetry... So the total time it takes for the object or particle moving in that direction in that particles perspective... .... So movement in that direction will be slower but movement in the other direction faster... So even though the whole object is moving in that direction... At the same speed on the macro scale... The particles' velocities in that direction are scaled by v' = v * gamma... And so are accelerations in that direction....

Is the distance to light also scaled by D' = D / gamma... So that the opposite crest reaches... Or.... D to light = D at start + (v - c) t.... D to light ' = D at start / gamma + (v - c) t / gamma or + (v - c) t * gamma?.... So for v=2c... D(t)' = -D - (-2c + c) t = ... or maybe. D(t)' = D / gamma + (v / gamma - c) t... If moving true away at 2c from light then v' appearent is moving toward light at c... and the other side at -vaway/3....

v = d/t. And c=d/t. Put in triangle solve for constant t... With tv and tc.... Maybe for all constant except angle solve cos of cos(angle vT,cT)... And dv and dc...

So mover traverses a different distance dv.... ct

So. c/gamma - v/gamma = c.... (dc / tc) * (tv) - dv / t = dc / tc. Where tv = dv /

dc / tv - dv / t = dc / tc. Earlier ^^^^

(dc / tc) * (tc / tv) - dv / t = dc / t

Time difference t' is the only thing that can sensibly separate a v and c with result c

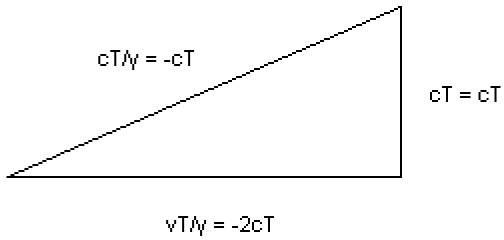
Delta x' / gamma = (a(t gamma)) / gamma = G M gamma / D.... Not equal to undoing effect of gamma …

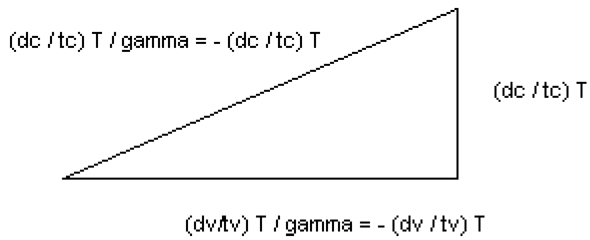
If a = (2m/s) / 1s

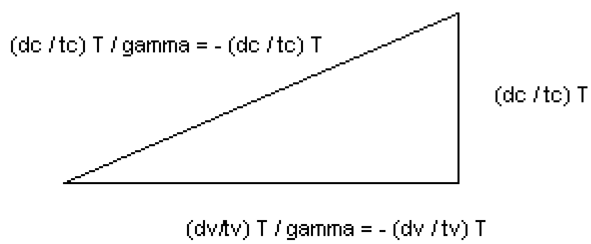
Then with t interval = 0.5 s... Must v = 1m/s or 0.5 m/s.... There is a mistake then.... For x' = a (t gamma) t. Not. a (t gamma)^2.... Ehh... Is x covered in 0.5s... 0.5 m... 1/2... 0.25 m at constant Accel... In 1 s... 1 m... If v = v + a. And x = x + v.... X = v + a... In 1 s.... X = 2... But if order. X = x + v. Then v = v + a. Then x = 0... So maybe x = x + v + 1/2 aprev + 1/2 acurrent....

In 2 s then... Constant Accel gives... 4 s * 2 m/s/s * 1/2... m = 4.... x = v1 + 1/2 a0 + 1/2 a1 + v2 + 1/2 a1 + 1/2 a2 = 0 + 0 + 1 + 2 + 1 + 1... 5 m.... Doesn't matter as long t = 1.... Just x0 = x-1 +.. v0 + a0.... Not x0 = v1 + a.... x1 = x0 + v0. Then v1 = v0 + a0....

aa10a.png







true v from apparent v' => v' = v * (c – v) / c => v' c = v * (c – v) => v' c = v c – v^2 => v^2 – vc + v'c = 0 => v = (- (-c) +/- sqrt((-c)^2 – 4 v' c)) / 2 = ½ (c +/- sqrt(c (c – 4 v')))

for v' = 10 c.... v = ½ (c +/- sqrt(c (c – 4 * 10 c))) = ½ c +/- ½ sqrt(c^2 – 40 c^2).... rather... v must be in the same direction as c, so if v>0, then it is the light coming toward us... and galaxy coming toward us... but because it is light toward and galaxy away (earlier: light away galaxy toward).... for c>0, v<0.... so v' = -10 c in this case.... if we additionally assume that original v>c, then v'<0..... let's try all cases.... for v' = -10 c..... v = ½ (c +/- sqrt(c (c + 4 * 10 c))) = ½ c +/- ½ sqrt(c^2 + 40 c^2) = ½ c +/- 6.4... c …… so v = +6.9 c.... (toward us).... or v = -5.9 c (away).. because for v<-c with v = -5.9 c (away), v' > 0... v' = -5.9 c ((c + 5.9 c) / c) = … < 0..... v<-c gives

(UP gamma) > 0.... but (DOWN gamma) < 0....? because -c means other direction...... so..... because for v<-c, -v>c, UP gamma will be calculated as ….. if v inward = -5.9 c..... according to inward dilation, inward v = -5.9 c ((c + 5.9 c) / c) …. but because it is NOT inward... we use the OUTWARD gamma to scale it.... v' OUTWARD = 5.9 c ((c – 5.9c) / c) = 5.9 c * - 4.9 = - 28.91 c.... NOT 10 c away..... if we use v' INWARD = 6.9 c * (c – 6.9 c) / c = 6.9 c * - 5.9 = - 40.71 c (away from us thus apparently....) BUT not v' = - 10 c...... so we must use complex numbers.... -<<<< 4 a c.... - 4 * 10 c.... not + 4 * 10 c... but it is complex.... because c is toward us, but v is away.... maybe v is away... and v' is away.... forward we must use either v away, c inward, v' away (v' < 0) OR v away, c inward, v' inward (v' > 0).... OR v inward, c inward, v' inward (v' > 0)... OR v inward, c inward, v' outward (v' < 0)... so

but v' outward means v' < 0 only for the case where v inward > 0 and v inward < c and using c …

inward v	outward v	inward c	outward c	inward gam	outward gam	inward v'	outward v'
> 0 ; < c	< 0 ; > -c	= c	= -c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	< vout ; > 2 vout
> c	< -c	= c	= -c	< 0			

outward v' is measured using - v inward * ((c + v inward) / c), and doesn't really mean anything... because it is using outward gamma, with inward velocity.... ^^^ but possibly it could affect inner chemical actions of electrons going outward, while general velocity is outward... ie... using general velocity only to calculate gammas for inner electron velocities back and forth.... so if inward v < 0, it only then makes sense to use outward v' (ie, v outward * (c – v outward) / c, not ^^) …. and if outward v < 0, it makes sense to use inward v' (ie, v inward * (c – v inward) / c)..... so.... and... c always inward....

inward v	outward v	inward c	outward c	inward gam	outward gam	inward v'	outward v'
> 0 ; < c	< 0 ; > -c	= c	= -c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	X
> c ; < 2c	< -c	= c	= -c	< 0 ; > -1	> 2 ; < 3	<0 ; >-vin	X
> 2c	< -2c	= c	= -c	< -1	> 3	<0 ; <-vin	X
< 0 ; > -c	> 0 ; < c	= c	= -c	< 0 ; > -1	< -1 ; > -2	X	> -vin ; < 0
< -c ; > -2c	> c	= c	= -c	> 0 ; < 1	< -2 ; > -3	X	>0 ; <vin
< -2c	> 2c	= c	= -c	> 1	< -3	X	>0 ; >vin

y = 1, y = x, y = x * (1 - x) / 1, y = - x * (1 - x) / 1 ^^ with c > 0, showing forward v' for v>0, and backward v' for v<0 (which isn't correct)
y = 1, y = x, y = x * (1 - abs(x)) / 1, y = - x * (1 - abs(x)) / 1 ^^ only forwards... rather, only have c,v same dir
All the coordinates and values depend on the object moving being x > 0.... if the object is at x < 0, then inward v' and outward v' values change places, and all values equations are multiplied by -1, thus reversing signs of the values and changing the direction of the greater-than/less-than sign.
All outward / inward pairs change places, not just the inward v' and outward v'.

Extended:

x	inward v	outward v	inward c	outward c	inward gam	outward gam	inward v'	outward v'
>0	> 0 ; < c	< 0 ; > -c	= c	= -c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	X
>0	> c ; < 2c	< -c	= c	= -c	< 0 ; > -1	> 2 ; < 3	<0 ; >-vin	X
>0	> 2c	< -2c	= c	= -c	< -1	> 3	<0 ; <-vin	X
>0	< 0 ; > -c	> 0 ; < c	= c	= -c	< 0 ; > -1	< -1 ; > -2	X	> -vin ; < 0
>0	< -c ; > -2c	> c	= c	= -c	> 0 ; < 1	< -2 ; > -3	X	>0 ; <vin
>0	< -2c	> 2c	= c	= -c	> 1	< -3	X	>0 ; >vin
<0	> 0 ; < c	< 0 ; > -c	= c	= -c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	X
<0	> c ; < 2c	< -c	= c	= -c	< 0 ; > -1	> 2 ; < 3	<0 ; >-vin	X
<0	> 2c	< -2c	= c	= -c	< -1	> 3	<0 ; <-vin	X
<0	< 0 ; > -c	> 0 ; < c	= c	= -c	< 0 ; > -1	< -1 ; > -2	X	> -vin ; < 0
<0	< -c ; > -2c	> c	= c	= -c	> 0 ; < 1	< -2 ; > -3	X	>0 ; <vin
<0	< -2c	> 2c	= c	= -c	> 1	< -3	X	>0 ; >vin
<0	< 0 ; > -c	> 0 ; < c	= -c	= c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	X
<0	< -c	> c ; < 2c	= -c	= c	< 0 ; > -1	> 2 ; < 3	<0 ; >-vin	X
<0	< -2c	> 2c	= -c	= c	< -1	> 3	<0 ; <-vin	X
<0	< 0 ; > -c	> 0 ; < c	= -c	= c	< 0 ; > -1	< -1 ; > -2	X	> -vin ; < 0
<0	< -c ; > -2c	> c	= -c	= c	> 0 ; < 1	< -2 ; > -3	X	>0 ; <vin
<0	< -2c	> 2c	= -c	= c	> 1	< -3	X	>0 ; >vin

Inward c refers to the signedness in gamma = (c – v) / c, not the direction that the light would be travelling in relation to origin from the moving object... So it is the direction that the light would be travelling to the moving object from origin. ALL of the inward outward values, …. WRONG just switch x <> 0...

x	inward v	outward v	inward c	outward c	inward gam	outward gam	inward v'	outward v'
<0	> 0 ; < c	< 0 ; > -c	= c	= -c	> 0 ; < 1	> 1 ; < 2	< vin ; > 0	X
<0	> c ; < 2c	< -c	= c	= -c	< 0 ; > -1	> 2 ; < 3	<0 ; >-vin	X
<0	> 2c	< -2c	= c	= -c	< -1	> 3	<0 ; <-vin	X
<0	< 0 ; > -c	> 0 ; < c	= c	= -c	< 0 ; > -1	< -1 ; > -2	X	> -vin ; < 0
<0	< -c ; > -2c	> c	= c	= -c	> 0 ; < 1	< -2 ; > -3	X	>0 ; <vin
<0	< -2c	> 2c	= c	= -c	> 1	< -3	X	>0 ; >vin
>0	< 0 ; > -c	> 0 ; < c	= -c	= c	> 0 ; < 1	> 1 ; < 2	X	< vin ; > 0
>0	< -c	> c ; < 2c	= -c	= c	< 0 ; > -1	> 2 ; < 3	X	<0 ; >-vin
>0	< -2c	> 2c	= -c	= c	< -1	> 3	X	<0 ; <-vin
>0	> 0 ; < c	< 0 ; > -c	= -c	= c	< 0 ; > -1	< -1 ; > -2	> -vin ; < 0	X
>0	> c ; < 2c	< -c	= -c	= c	> 0 ; < 1	< -2 ; > -3	>0 ; <vin	X
>0	> 2c	< -2c	= -c	= c	> 1	< -3	>0 ; >vin	X

>0 | < 0 ; > -c | > 0 ; < c | = -c | = c | > 1 ; < 2 | > 0 ; < 1 | X | > vin ; < 0
>0 | < -c | > c ; < 2c | = -c | = c | > 2 ; < 3 | < 0 ; > -1 | X | >0 ; > -vin
>0 | < -2c | > 2c | = -c | = c | > 3 | < -1 | X | >0 ; < -vin
>0 | > 0 ; < c | < 0 ; > -c | = -c | = c | < -1 ; > -2 | < 0 ; > -1 | > vin ; < 0 | X
>0 | > c ; < 2c | < -c | = -c | = c | < -2 ; > -3 | > 0 ; < 1 | >0 ; <-vin | X
>0 | > 2c | < -2c | = -c | = c | < -3 | > 1 | >0 ; >-vin| X

Here... inward and outward v refer not to absolute values of velocities interpreted in our frame of reference, but absolute values in the coordinate system of the graph, with the inward v column containing the case where the object is moving closer. But there's positive and negative.... But for inward v with x > 0, the rows still refer to the same velocities as the ones above, with the velocity actually reversed... so for inward v < 0, inward v > -c, with x > 0, even though the inward v is < 0, it is refering to the absolute coordinate system from the right of the origin.... everything alright. No.... because the inward v is < 0, for #1 in the second block, it is actually moving to the left, getting closer to origin, even though in the direction going closer from there, it would have been an v inward > 0.... if moving closer...

x | v abs | inward v | outward v | inward going c abs | outward going c abs | inward gam | outward gam | inward v' | outward v' | v' abs

<0 | > 0 | > 0 ; < c | < 0 ; > -c | = c | = -c | > 0 ; < 1 | > 1 ; < 2 | < vin ; > 0 | X
<0 | > 0 | > c ; < 2c | < -c | = c | = -c | < 0 ; > -1 | > 2 ; < 3 | <0 ; >-vin | X
<0 | > 0 | > 2c | < -2c | = c | = -c | < -1 | > 3 | <0 ; <-vin | X
<0 | < 0 | < 0 ; > -c | > 0 ; < c | = c | = -c | < 0 ; > -1 | < -1 ; > -2 | X | > -vin ; < 0
<0 | < 0 | < -c ; > -2c | > c | = c | = -c | > 0 ; < 1 | < -2 ; > -3 | X | >0 ; <vin
<0 | < 0 | < -2c | > 2c | = c | = -c | > 1 | < -3 | X | >0 ; >vin

>0 | > 0 | < 0 ; > -c | > 0 ; < c | = -c | = c | > 0 ; < 1 | > 1 ; < 2 | X | < vin ; > 0
>0 | > 0 | < -c | > c ; < 2c | = -c | = c | < 0 ; > -1 | > 2 ; < 3 | X | <0 ; >-vin
>0 | > 0 | < -2c | > 2c | = -c | = c | < -1 | > 3 | X | <0 ; <-vin
>0 | < 0 | > 0 ; < c | < 0 ; > -c | = -c | = c | < 0 ; > -1 | < -1 ; > -2 | > -vin ; < 0 | X
>0 | < 0 | > c ; < 2c | < -c | = -c | = c | > 0 ; < 1 | < -2 ; > -3 | >0 ; <vin | X
>0 | < 0 | > 2c | < -2c | = -c | = c | > 1 | < -3 | >0 ; >vin| X

>0 | > 0 | < 0 ; > -c | > 0 ; < c | = -c | = c | > 1 ; < 2 | > 0 ; < 1 | X | > vin ; < 0
>0 | > 0 | < -c | > c ; < 2c | = -c | = c | > 2 ; < 3 | < 0 ; > -1 | X | >0 ; > -vin
>0 | > 0 | < -2c | > 2c | = -c | = c | > 3 | < -1 | X | >0 ; < -vin
>0 | < 0 | > 0 ; < c | < 0 ; > -c | = -c | = c | < -1 ; > -2 | < 0 ; > -1 | > vin ; < 0 | X
>0 | < 0 | > c ; < 2c | < -c | = -c | = c | < -2 ; > -3 | > 0 ; < 1 | >0 ; <-vin | X
>0 | < 0 | > 2c | < -2c | = -c | = c | < -3 | > 1 | >0 ; >-vin| X

(1 – 0.25) + (1 + 0.25) = 2

x of mover relative to us	v absolute	Inward v	Outward v	Inward-going c in absolute values	Outward-going c in absolute values	Positive-going c in absolute values	Inward gamma	Outward gamma	Combined gamma extent	Positive-ward gamma	Negative-ward gamma	Inward v'	Outward v'	V' absolute
< 0	> 0 ; < c	> 0 ; < c		c	-c	c	> 0 ; < 1	> 1; < 2	2					
< 0	> c ; < 2c	> c ; < 2c		c	-c	c	< 0 ; > -1	> 2; < 3	2					
< 0	> 2c	> 2c		c	-c	c	< -1	> 3						
< 0	< 0 ; >	< 0 ; >		c	-c	c	< 0 ; >	< -1 ; >						

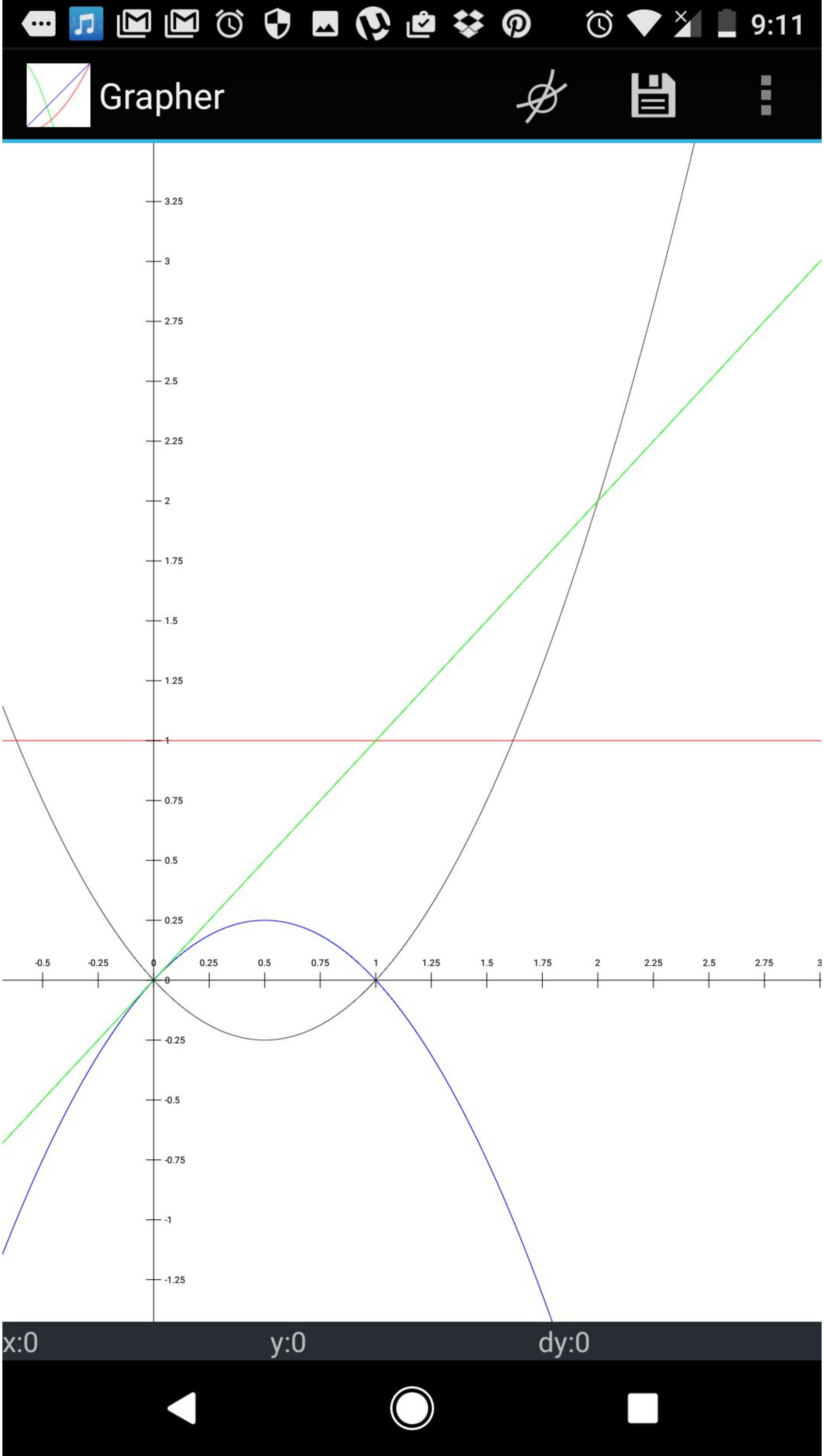
	-c	-c					-1	-2						
< 0	< -c ; > -2c	< -c ; > -2c		c	-c	c	> 0 ; < 1	< -2 ; > -3						
< 0	< -2c	< -2c		c	-c	c	> 1	< -3						
> 0				-c	c	c								
> 0				-c	c	c								
> 0				-c	c	c								
> 0				-c	c	c								
> 0				-c	c	c								
> 0				-c	c	c								

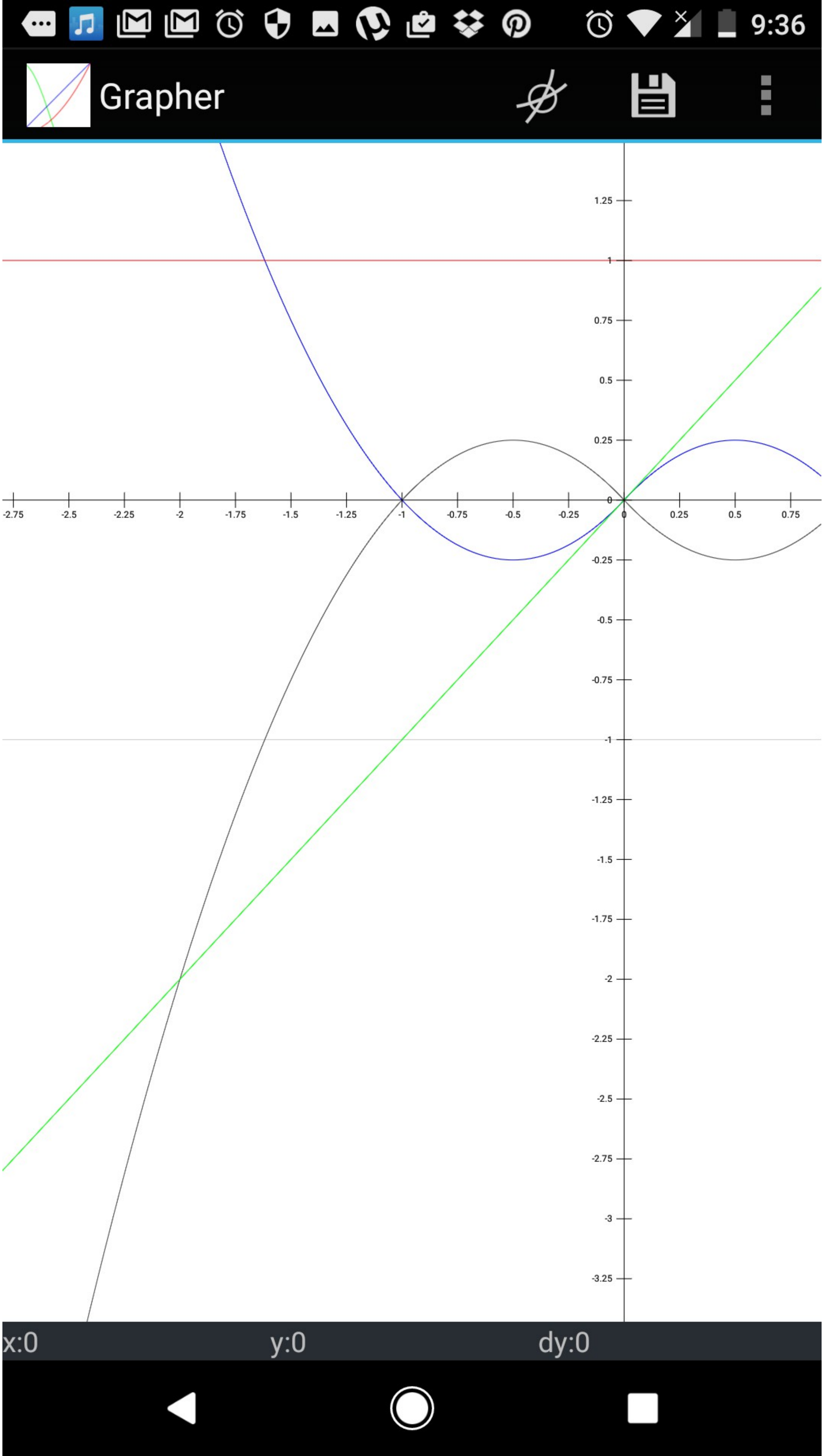
$a x^2 + b x + c = 0$

$x = (-b \pm \mathrm{sqrt}(b^2 – 4 a c)) / 2 a$

Case #6.... inward v < -2c, inward c = c, inward gamma > 1, outward.... WRONG

Case #....


9:11
Grapher
3.25
3
2.75
2.5
2.25
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
-0.25
-0.5
-0.75
-1
-1.25
-0.5
-0.25
0.25
0.5
0.75
1.25
1.5
1.75
2.25
2.5
2.75
3
x:0
y:0
dy:0



9:36
Grapher
1.25
1
0.75
0.5
0.25
0
-0.25
-0.5
-0.75
-1
-1.25
-1.5
-1.75
-2
-2.25
-2.5
-2.75
-3
-3.25
-2.75
-2.5
-2.25
-2
-1.75
-1.5
-1.25
-1
-0.75
-0.5
-0.25
0
0.25
0.5
0.75
x:0
y:0
dy:0

Use earth size orientabiltiy map
And Mars moon sun Jupiter etc
For sim to plan trajectory of satellite probe
To reach c+ at 1g for a year+

Use sped to import 16-bit height map earth etc and high res texture. To generate orientabiltiy map

Would take high precision fix fraction to do earth instead of floats... Custom generator utility? For or gen... Maybe use doubles... Or ints... Or 64 bit ints...

Rewrite sped internals to use 64 bit ints when rendering and genning or maps. And option to enable them in config. Eg. use_high_precision 0 1. Maybe also render using high precision in gl view using custom shader to raster.

Time for light to reach target D – v t * (c – abs(v))/c = 0 => v t * (c – abs(v))/c = D =>

lim x → 0 of { |x|/x } = sign(x) because... if we cancel out the magnitude of |x| and x, we only get the sign, and the thing between the left and the right is always = +/- 1 from both sides... so it will be 0.
=> t = D c / v (c - abs(v)) = …... assuming it is going TOWARD the light... but.... v t * (c – abs(v))/c = - D => t = - D c / v (c - abs(v)) = => t = - 10 * 1 / 2 (1 – 2)) = 5.... t = 1 / 0.5 * 0.5 = 4 already AWAY no (D – c t) + v t (c – abs(v)) / c = > 10 – t + 2 t (1 – 2) = 0 => D = c t – v t (c – abs(v)) / c => 1/t = (c – v (c – abs(v))) / D => t = D / (c – v (c – abs(v))) => t = 10 / (1 – 2 (1 – 2)) = 10 / (1+2) ???
=> (10 – t) + 2 t (1 – 2) =0 => 10 – 10/3 + (20/3) * -1 = 0 => (30 – 10 – 20)/3 = 0 cccc
(D – c t) – v t (c – abs(v)) / c = 0 => moving toward at v>c D = c t + v t (c – abs(v)) / c => 1 / t = (c + v (c – abs(v)) / c) / D => t = D / (c + v (c – abs(v)) / c) = 10 / (1 + 2 (1 – 2)) = 10 / (1 – 2) = -10????

x | v abs | inward v | outward v | inward going c abs | outward going c abs | inward gam | outward gam | inward v' | outward v' | v' abs

<0 | > 0 | > 0 ; < c | < 0 ; > -c | = c | = -c | > 0 ; < 1 | > 1 ; < 2 | < vin ; > 0 | X
<0 | > 0 | > c ; < 2c | < -c | = c | = -c | < 0 ; > -1 | > 2 ; < 3 | <0 ; >-vin | X
<0 | > 0 | > 2c | < -2c | = c | = -c | < -1 | > 3 | <0 ; <-vin | X
<0 | < 0 | < 0 ; > -c | > 0 ; < c | = c | = -c | < 0 ; > -1 | < -1 ; > -2 | X | > -vin ; < 0
<0 | < 0 | < -c ; > -2c | > c | = c | = -c | > 0 ; < 1 | < -2 ; > -3 | X | >0 ; <vin
<0 | < 0 | < -2c | > 2c | = c | = -c | > 1 | < -3 | X | >0 ; >vin

>0 | > 0 | < 0 ; > -c | > 0 ; < c | = -c | = c | > 0 ; < 1 | > 1 ; < 2 | X | < vin ; > 0
>0 | > 0 | < -c | > c ; < 2c | = -c | = c | < 0 ; > -1 | > 2 ; < 3 | X | <0 ; >-vin
>0 | > 0 | < -2c | > 2c | = -c | = c | < -1 | > 3 | X | <0 ; <-vin
>0 | < 0 | > 0 ; < c | < 0 ; > -c | = -c | = c | < 0 ; > -1 | < -1 ; > -2 | > -vin ; < 0 | X
>0 | < 0 | > c ; < 2c | < -c | = -c | = c | > 0 ; < 1 | < -2 ; > -3 | >0 ; <vin | X
>0 | < 0 | > 2c | < -2c | = -c | = c | > 1 | < -3 | >0 ; >vin| X

>0 | > 0 | < 0 ; > -c | > 0 ; < c | = -c | = c | > 1 ; < 2 | > 0 ; < 1 | X | > vin ; < 0
>0 | > 0 | < -c | > c ; < 2c | = -c | = c | > 2 ; < 3 | < 0 ; > -1 | X | >0 ; > -vin
>0 | > 0 | < -2c | > 2c | = -c | = c | > 3 | < -1 | X | >0 ; < -vin
>0 | < 0 | > 0 ; < c | < 0 ; > -c | = -c | = c | < -1 ; > -2 | < 0 ; > -1 | > vin ; < 0 | X
>0 | < 0 | > c ; < 2c | < -c | = -c | = c | < -2 ; > -3 | > 0 ; < 1 | >0 ; <-vin | X
>0 | < 0 | > 2c | < -2c | = -c | = c | < -3 | > 1 | >0 ; >-vin| X

(1 – 0.25) + (1 + 0.25) = 2

x of mover relative to us	v absolute	Inward v	Outward v	Inward-going c in absolute values	Outward-going c in absolute values	Positive-going c in absolute values	Inward gamma	Outward gamma	Combined gamma extent	Positive-ward gamma	Negative-ward gamma	Forward gamma (in v absolute direction)	Backward gamma (in – v absolute direction)	Inward v'	Outward v'	Forward v'	Backward v'	V' absolute
< 0	> 0 ; < c A #1	> 0 ; < c A #3	< 0 ; > -c a #5	c D #1	-c	c	> 0 ; < 1	> 1; < 2	2	> 0 ; < 1	> 1 ; < 2	> 0 ; < 1	> 1 ; < 2				N/A	> 0 ; <= ¼c
< 0	> c ; < 2c B #1	> c ; < 2c B #3	< -c ; > -2c b #5	c D #2	-c	c	< 0 ; > -1	> 2; < 3	2	< 0 ; > -1	> 2 ; < 3	< 0 ; > -1	> 2 ; < 3				N/A	< 0 ; > -v ; < -c for v' < -c = v * (c – abs(v)) / c < -c v * (c –

																		abs(v) < -c^2 v *c – v * abs(v) < - c^2 v * abs(v) + v * c
< 0	> 2c C #1	> 2c C #3	< -2c c #5	c D #3	-c	c	< -1	> 3	2	< - 1	> 3	< - 1	> 3				N/A	
< 0	< 0 ; > -c a #1	< 0 ; > -c a #3	> 0 ; < c A #5	c D #4	-c	c	< 0 ; > -1	< -1 ; > -2	2	< 0 ; > -1	< -1 ; > -2	< -1 ; > -2	< 0 ; > -1			N/A		
< 0	< -c ; > -2c b #1	< -c ; > -2c b #3	> c ; < 2c B #5	c D #5	-c	c	> 0 ; < 1	< -2 ; > -3	2	> 0 ; < 1	< -2 ; > -3	< -2 ; > -3	> 0 ; < 1			N/A		
< 0	< -2c c #1	< -2c c #3	> 2c C #5	c D #6	-c	c	> 1	< -3	2	> 1	< -3	< -3	> 1			N/A		
> 0	> 0 ; < c A #2	< 0 ; > -c A #4	> 0 ; < c A #6	-c E #1	c	c	< 0 ; > -1	< -1 ; > -2	2	< -1 ; > -2	< 0 ; > -1	< -1 ; > -2	< 0 ; > -1			N/A		
> 0	> c ; < 2c B #2	< -c ; > -2c B #4	> c ; < 2c B #6	-c E #2	c	c	> 0 ; < 1	< -2 ; > -3	2	< -2 ; > -3	> 0 ; < 1	< -2 ; > -3	> 0 ; < 1			N/A		
> 0	> 2c C #2	< -2c C #4	> 2c C #6	-c E #3	c	c	> 1	< -3	2	< -3	> 1	< -3	> 1			N/A		
> 0	< 0 ; > -c a #2	> 0 ; < c a #4	< 0 ; > -c a #6	-c E #4	c	c	> 0 ; < 1	> 1; < 2	2	> 1; < 2	> 0 ; < 1	> 0 ; < 1	> 1; < 2				N/A	
> 0	< -c ; > -2c b #2	> c ; < 2c b #4	< -c ; > -2c b #6	-c E #5	c	c	< 0 ; > -1	> 2; < 3	2	> 2; < 3	< 0 ; > -1	< 0 ; > -1	> 2; < 3				N/A	
> 0	< -2c c #2	> 2c c #4	< -2c c #6	-c E #6	c	c	< -1	> 3	2	> 3	< -1	< -1	> 3				N/A	
x of mover relative to us	v absolute	Inward v	Outward v	Inward-going c in absolute values	Outward-going c in absolute values	Positive-going c in absolute values	Inward gamma	Outward gamma	Combined gamma extent	Positive-ward gamma	Negative-ward gamma	Forward gamma (in v absolute direction)	Backward gamma (in – v absolute direction)	Inward v'	Outward v'	Forward v'	Backward v'	V' absolute
= 0	= 0																	
= 0	= c																	

= 0	= -c																	
< 0	= 0																	
< 0	= c																	
< 0	= -c																	
> 0	= 0																	
> 0	= c																	
> 0	= -c																	
= 0	> 2c																	
= 0	< -2c																	
< 0	> 2c																	
< 0	< -2c																	
> 0	= 2c																	
> 0	= -2c																	
= 0	= 2c																	
< 0	= 2c																	
> 0	= 2c																	
x of mover relative to us	v absolute	Inward v	Outward v	Inward-going c in absolute values	Outward-going c in absolute values	Positive-going c in absolute values	Inward gamma	Outward gamma	Combined gamma extent	Positive-ward gamma	Negative-ward gamma	Forward gamma (in v absolute direction)	Backward gamma (in – v absolute direction)	Inward v'	Outward v'	Forward v'	Backward v'	V' absolute

a x^2 + b x + c = 0

x = (-b +/- sqrt(b^2 – 4 a c)) / 2 a

Case #6.... inward v < -2c, inward c = c, inward gamma > 1, outward.... WRONG

Case #....

Will light from complex D ever reach non-complex positions? With t = r + ½ i where vr = t and vi = 2 t there are line intersection where t > 0, i = 0, and r intersects...

“”ℂ can be constructed as the field with underlying set ℝ2, and addition and multiplication defined by

(a,b)+(c,d)=(a+c,b+d)
(a,b)(c,d)=(ac-bd,ad+bc)

It's easy to verify that this defines a field, and that the set of all members of the form (x,0) is a subfield. If we define a strict total order on that subfield by (x,0)<(y,0) if and only if x<y

this subfield is isomorphic to ℝ. That means that its members satisfy all the requirements from the definition of the real numbers, so we might as well forget about the ℝwe started with, and use the symbol ℝfor this subfield of ℂinstead. Then we can call its members "real numbers".””

< 0 ; > -v ;
< -c for v' < -c = v * (c – abs(v)) / c < -c

v * (c – abs(v)) < -c^2

v *c – v * abs(v) < - c^2

v * abs(v) + v * c + c^2 < 0

a x^2 + b x + c = 0

x = (-b +/- sqrt(b^2 – 4 a c)) / 2 a

a = |v|/v = sign(v)
b = c
c = c^2

v = (-c +/- sqrt(c^2 – 4 sign(v) c^2)) / 2 sign(v)

v = (-c +/- sqrt(c^2 – 4 c^2)) / 2   for v > 0
v = - (-c +/- sqrt(c^2 + 4 c^2)) / 2   for v < 0
all for v' = +/- c,   where v' = - c for v > c   and v' = c   for v < -c

v = (- c +/- sqrt(- 3 c^2)) / 2   for v > 0
v = - (-c +/- sqrt(5 c^2)) / 2   for v < 0

for v > 0, get sqrt (< 0) complex

derivation of quadratic formula

a x^2 + b x + c = 0

$v * abs(v) + v * c + c^2 < 0$ for $v' < -c$ for $v > 0$
$v * abs(v) + v * c + c^2 > 0$

$v' < -c \Rightarrow v * (c – abs(v)) / c < -c$ for $v > 0$
$v * (c – abs(v)) < -c^2$
$v * c – v * abs(v) < - c^2$
$v * abs(v) + v * c + c^2 < 0$

$v' > c \Rightarrow v * (c – abs(v)) / c > c$ for $v < 0$
$v * (c – abs(v)) > c^2$
$v * c – v * abs(v) > c^2$
$- v * abs(v) + v * c - c^2 > 0$

do a whole quake...

$a x^2 + b x + c = 0$
$x = (-b +/- sqrt(b^2 – 4 a c)) / 2 a$

$a = |v|/v = sign(v) = 1$
$b = c$
$c = c^2$
for $v > 0$, $v' < -c$

$a = - |v|/v = - sign(v) = +1$
$b = c$
$c = - c^2$
for $v < 0$, $v' > c$

$v * abs(v) * 2 – v^2 = (2 v^2 * sign(v) – v^2) = v^2$ for $v>0$ and $- 4 v^2$ for $v<0$
$abs(x) * x^{-1} = abs(x)^1 * x^{-1} = sign(x) * x^0$....
$sign(x) = abs(x)^1 * x^{-1} / x^0 = \sim |x|/x$ because $abs(x)^y = sign(x) * |x|^y$ for odd y eg
for $y = (-1)^x$ gives real part like cos with period 2 and imaginary part like sin with period 2....

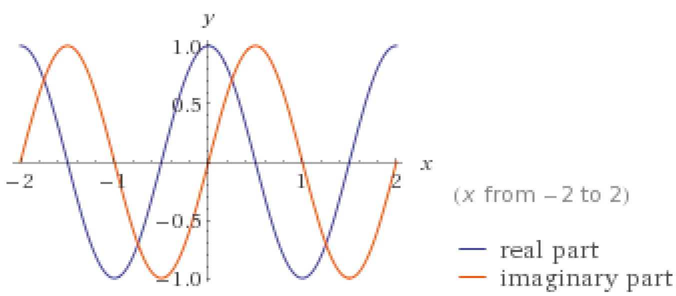
y=(-1)^x

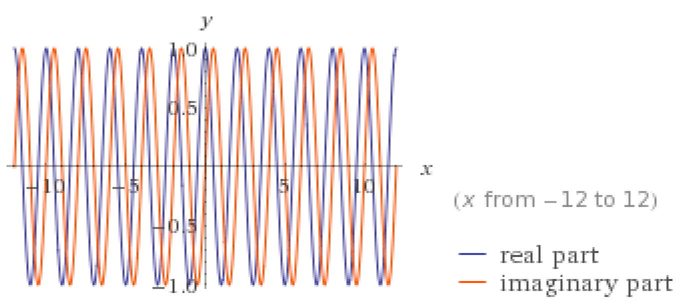
Web Apps Example

Input:

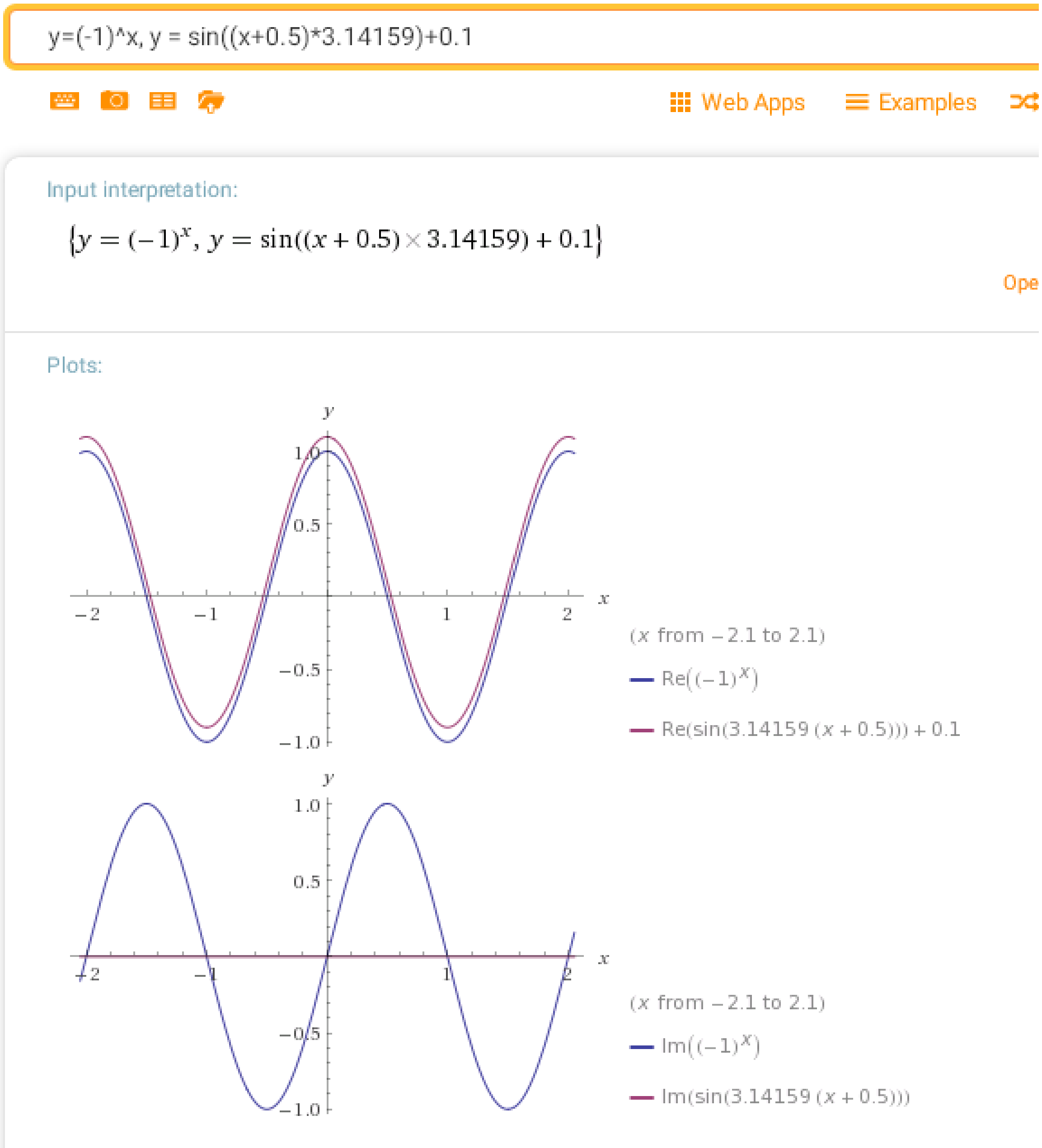
$y = (-1)^x$

Plots:



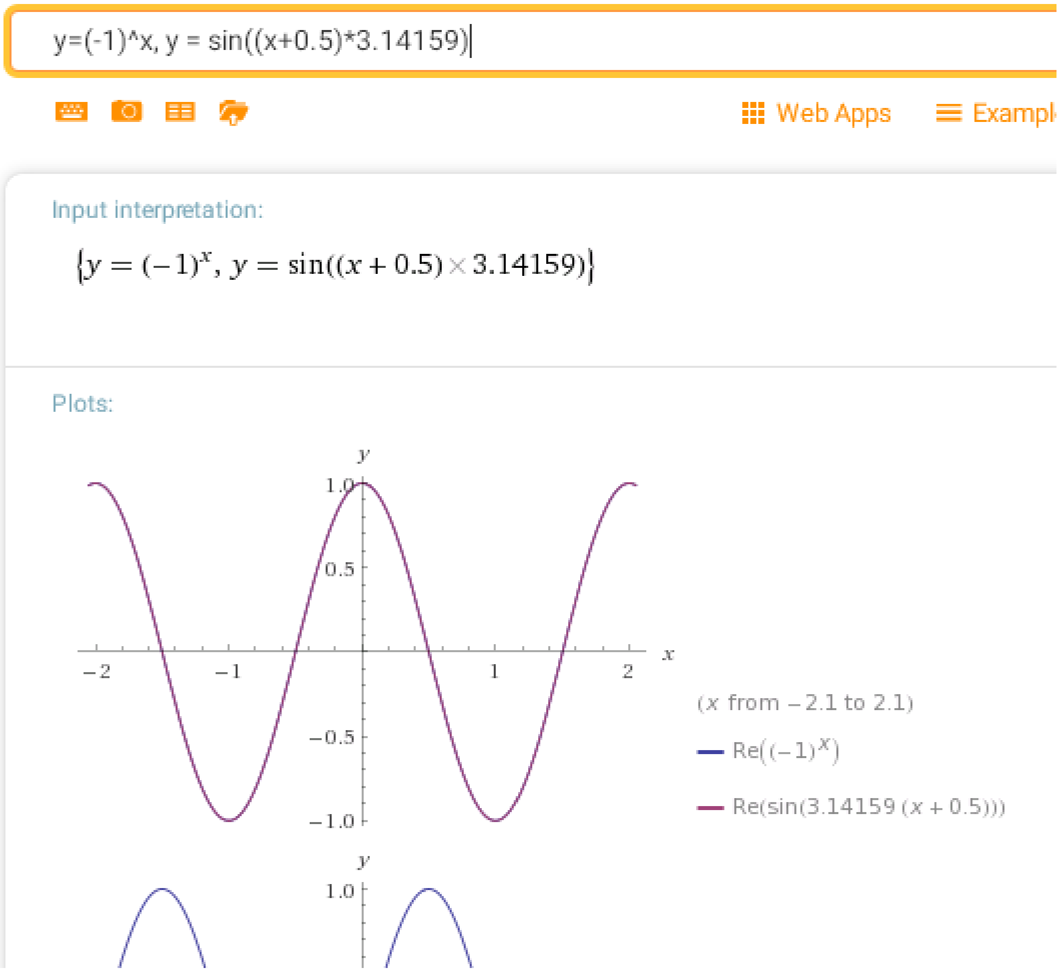


odd-1.png



odd-1b.png

odd-1c.png



so y = (-1)^x = sin((x+0.5) * pi) for real y and y = (-1)^x = cos((x+0.5) * pi) for imaginary y

the real and imaginary part of a number can thus be gotten by...

for a real part y = (-1)^x where x = 1/k where k=2,4,6... even number
and an imaginary part .... real part y = sin((x+0.5) * pi) for all x.... imaginary part y = cos (x+0.5) * pi) for all x........ all for y = (-1)^x

[continued^^:] v * abs(v) * 2 – v^2 = (2 v^2 * sign(v) – v^2) = v^2 for v>0 and - 4 v^2 for v<0

abs(x) * x^-1 = abs(x)^1 * x^-1 = sign(x) * x^0....
sign(x) = abs(x)^1 * x^-1 / x^0 = ~ |x|/x because abs(x)^y = sign(x) * |x|^y for odd y eg for y = (-1)^x [/previous] odd y is all y that gives (-1)^y < 0 so odd y is all y that gives real sin((y+0.5) * pi) < 0 and imaginary part of any y = (-1)^x is cos((x+0.5) * pi) and real part of any y = (-1)^x is sin((x+0.5) * pi)..... so we don't need all these 4throot(-1) and 6throot(-1), because it is only one imaginary value and one real value for any complex number... and can be expressed... a = re(x) b = im(x) with z = a + b sqrt(-1) and b = c cos((x+0.5) * pi) ..?? and i = (-1)^0.5 AND i = (-1)^-1.5 AND -i = (-1)^1.5 and -i = (-1)^-0.5 …..
so abs(x)^y = sign(x) * |x|^y for odd y, ie z = (-1)^y < 0..... and for even y, abs(x)^y = sign(x) * |x|^y also... but we don't need abs(..) or sign(x) …... branchless sign function without division by zero to stick into dumb graphing programs without a sign() function.... and abs..... is.... +sqrt(x^2) ie the positive solution.... the only solution on dumb graphing calculators or programs... sign(x) = sqrt(x^2)^1 * x^-1............ and the only way to plug into one function and naturally without having to resort to artificial branching that is not classical math.... -1 = sqrt((-1)^2)* (-1)^-1 => -1 = sqrt(1) / -1 = -1 and sqrt((x^2))^1 * x^-1 = ((x^2)^1/2)^(1-1) = x ^ 0 must give 0 for x = 0 ie 0^0 = 0.... and lim x->0+ { 0^x } = 0 and lim x->0- { 0^x } = infinity and for x < 0 sqrt((x^2))^1 * x^-1 = ((x^2)^1/2)^(1-1) = x ^ 0 must give -1 or …. x^2 = 0 (0 ^ ½) ^ 0 = 0 ^ 0 and = (x^2) ^ (½ * 0) and x^(2*1/2*0) = (-1)^(0)... should give -1.... the result is only -1 = x^(-1) …. for x = -1........

Input:
{y = (-1)^x, y = (-1)^(-x), y = 0^x, y = 0^x, y = 0^(-x)}
Open code
Alternate form:
{(-1)^x = y, y = (-1)^(-x), 0^x = y, 0^x = y, 0^(-x) = y}
Open code
Alternate form assuming x and y are positive:
{e^(i π x) = y, y = e^(-i π x), y = 0, y = 0, y = ∞^~}

Therefore... above... y = 0^x = 0.... sqrt((x^2))^1 * x^-1 = sqrt((-1)^2)^1 * (-1)^-1 = -1.... because sqrt gives +1, while (sqrt(x^2) ^ ½) ^ 0 gives (x^2)^() any y = x^a can be turned into y = x^b / x^c where a = b – c or y = x^b * x^d where a = b + d so (sqrt(x^2) ^ ½) ^ 0 gives (sqrt(x^2) ^ 3) / (sqrt(x^2) ^ 3) = x^6 / x^6 …. = 1.....

ie in the case that the program or calculator is smart enough to use the power law....

Therefore it seems it is more correct to say that (-1)^0 = -1.... in accordance with the sign function... and the way the sqrt function only gives the positive result, and not with the power law result... ie

In the case of the power law:
sign(x) = abs(x)^1 * x^-1 / x^0 (= ~ |x|/x) = sqrt((x^2))^1 * x^-1... however we got rid of the / x^0.... which by our definition should give -1 for x = -1... so gives +1 but that is the definition in the classical system.....

abs(x) * x^-1 = abs(x)^1 * x^-1 = sign(x) * x^0....
sign(x) = abs(x)^1 * x^-1 / x^0 = ~ |x|/x   because abs(x)^y = sign(x) * |x|^y for odd y

though the above would indicate that
abs(x) * x^-1 = abs(x)^1 * x^-1 = sign(x) * x^0
with sign(x) * x^0 = -1 * -1 by the NEW rules...

sign(x) = abs(x) * x^-1 = sign(x) * x^0 …   for odddd   … abs(x)^y / x = sign(x) * |x|^y...   abs(x)^1 * x^-1 = sign(x) * x^0 |x|^1 * x^-1 = sign(x) * x^0
basically |x|/x = sign(x)   ie |x|^1 * x^-1 = the component of the sign of x * 1   and |x|^2 * x^-2 =

Basically

For the power law rule:
(sqrt(x^2) ^ 3) / (sqrt(x^2) ^ 3) = sqrt(x^2)^0 = 1
for x = -1   and sqrt(x) = x^½   and distribution of powers

And for the dumb computer sqrt that only gives sqrt>0:
(sqrt(x^2))^1 * x^-1 = (sqrt((-1)^2) ^ 1) * (-1)^(-1) = sqrt(1) / -1 = -1
for x = -1   and sqrt(x) > 0

And for x=0....   sqrt(0^2)/0 = … division by zero.... but for power law... sqrt(0^2)/0 = 0/0   which may give 1 if we ignore that it's a zero and replace 0 by x,   or 0.... if we assume any other operation of multiplication or division after a number becomes zero is zero....   or -1 if we assume that division by 0 is indeterminate because   a * 0#1 = 0#2   and therefore   a = 0#2 / 0#1....

v' < -c   =>   v * (c – abs(v)) / c < -c   for v > 0
v * (c – abs(v)) < -c^2
v * c – v * abs(v) < - c^2
v * abs(v) + v * c + c^2 < 0

v' > c   =>   v * (c – abs(v)) / c > c   for v < 0
v * (c – abs(v)) > c^2

v * c – v * abs(v) > c^2
- v * abs(v) + v * c - c^2 > 0

do a whole quake...

a x^2 + b x + c = 0
x = (-b +/- sqrt(b^2 – 4 a c)) / 2 a

a = |v|/v = sign(v) = 1
b = c
c = c^2
for v > 0,   v' < -c

a = - |v|/v = - sign(v) = +1
b = c
c = - c^2
for v < 0,   v' > c

for v > 0,   v' < -c,
v > (- c +/- sqrt(c^2 – 4 c^2)) / 2...

for v < 0, v' > c
v < - (- c +/- sqrt(c^2 + 4 c^2)) / 2 = c/2 -/+ sqrt(5 c^2)/2 = c/2 -/+ 2.236.. c / 2 = c/2 -/+ 1.118... c = 1.618... c   or   -0.618... c

1.618 (1 – 1.618) / 1 = -0.999... ~= -c
incorrect^^^ positive.... v = 1.618....

-0.618 (1 - |-0.618|) / 1 =   -0.236... !=~ -c

-0.618 (1 + 0.618) / 1 = -0.999 ~= -c.....

using quadratic formula derivation...

a x^2 + b x + c = 0
v * (c – abs(v)) / c < -c   for v > 0
v * (c – abs(v)) / c > c   for v < 0

a x^2 + b x + c = 0
v * (c – v) / c < -c   for v > 0   and v > c
v * (c + v) / c > c   for v < 0   and v < -c

$a x^2 + b x + c = 0$
$v * (c - v) / c + c < 0$ for $v > 0$ and $v > c$
$v * (c + v) / c - c > 0$ for $v < 0$ and $v < -c$

$a x^2 + b x + c = 0$
$- v^2 / c + v + c < 0$ for $v > 0$ and $v > c$
  $a = -1/c$, $b = 1$ $c = c$
$v^2 / c + v - c > 0$ for $v < 0$ and $v < -c$
  $a = 1/c$, $b = 1$ $c = -c$

$a x^2 + b x = -c$
$- v^2 / c + v < -c$ for $v > 0$ and $v > c$
$v^2 / c + v > c$ for $v < 0$ and $v < -c$

$x^2 + (b/a) x = - c/a$
  $b/a = 1/(-1/c) = -c$
  $c/a = c/(-1/c) = -1$
$v^2 - c v > 1$ for $v > 0$ and $v > c$
  $b/a = 1/(1/c) = c$
  $c/a = -c/(-1/c) = 1$
$v^2 + c v > -1$ for $v < 0$ and $v < -c$

$x^2 + (b/a) x + (b^2 / 4 a^2) = - c/a + (b^2 / 4 a^2)$
  $b^2 / 4 a^2 = 1 / 4 * (1/c^2) = c^2 / 4$
$v^2 - c v + c^2 / 4 > 1 + c^2 / 4$ for $v > 0$ and $v > c$
  $b^2 / 4 a^2 = 1 / 4 * (1/c^2) = c^2 / 4$
$v^2 + c v + c^2 / 4 > -1 + c^2 / 4$ for $v < 0$ and $v < -c$

$x^2 + (b/a) x + (b^2 / 4 a^2) = (b^2 - 4 a c) / 4 a^2$
  $4 a c = 4 (-1/c) (c) = - 4$
  $(b^2 - 4 a c) / 4 a^2 = (1 + 4) / (4 (1/c^2)) = 5 c^2 / 4$
$v^2 - c v + c^2 / 4 > 5 c^2 / 4$
  $4 a c = 4 (1/c) (-c) = -4$
  $(b^2 - 4 a c) / 4 a^2 = (1 + 4) /$

…............................

$a x^2 + b x + c = 0$
$- v^2 / c + v + c < 0$ for $v > 0$ and $v > c$
  $a = -1/c$, $b = 1$ $c = c$
$v^2 / c + v - c > 0$ for $v < 0$ and $v < -c$
  $a = 1/c$, $b = 1$ $c = -c$

$x = (-b \pm \sqrt{ b^2 - 4 a c }) / 2 a$
$v = (-1 \pm \sqrt{ 1 - 4 (-1/c) c }) / 2 (-1/c) = \frac{1}{2} c \pm \frac{1}{2} c \sqrt{5}$ for $v > c$ and $v' = -c$

v = (-1 +/- sqrt(1 – 4 (1/c) (-c))) / 2 (1/c) = - ½ c +/- ½ c sqrt(5)   for v < -c   and v' = c

for v' = - 10 c,
v = ½ c +/- ½ c sqrt(5) = 1.618...

for any v' < 0
v' = v (c – v) / c
v' = - v^2 / c + v
0 = - v^2 / c + v – v'
a = -1/c
b = 1
c = - v'
v = (-1 +/- sqrt(1 – 4 (-1/c) (- v'))) / 2 (-1/c)   for v > 0   for real solution, v' <= ¼ c
1 – 4 (-1/c) (-v') >= 0
-4 (-1/c) (-v') >= -1
(-1/c) (-v') <= ¼
(-v') >= - ¼ c
v' <= ¼ c

for v' = - 10 c
v = (-1 +/- sqrt(1 – 4 (-1/c) (- v'))) / 2 (-1/c) = ½ c (1 +/- sqrt(1 + (4/c) (10c))) = ½ c (7.403...) = 3.201 … c   (toward inward)

?????????????

????????????

???????????

/////////
8:15 pm:
Can wind back simulation at least
Given previous velocity that was added to get the current position
Then unwind all particles to that previous position
Then calculate all the forces and accels at that point
Given that point of forces and accels, calculate the change in velocity that would have given the velocity that already have,
Then subtract those forces and accels from the that velocity, to get a velocity even farther back one step, and repeat
////

8:55 pm:
/////

There are three intersections to give v for any v' < 1/4 c. And > - 1/4 c

If we are moving away at eg 0.8... c. And z11 is moving away at 0.8 c... The appearentXX v true = 1.6... c...   Or whatever.   Such that. v'a + v'b = 10 c....   If v'a away = v'b away = 5 c.... Then v away. is. Even less than < 0.8 c....   (Ie v = 1.6c. For v' = 10c ^^^^^)

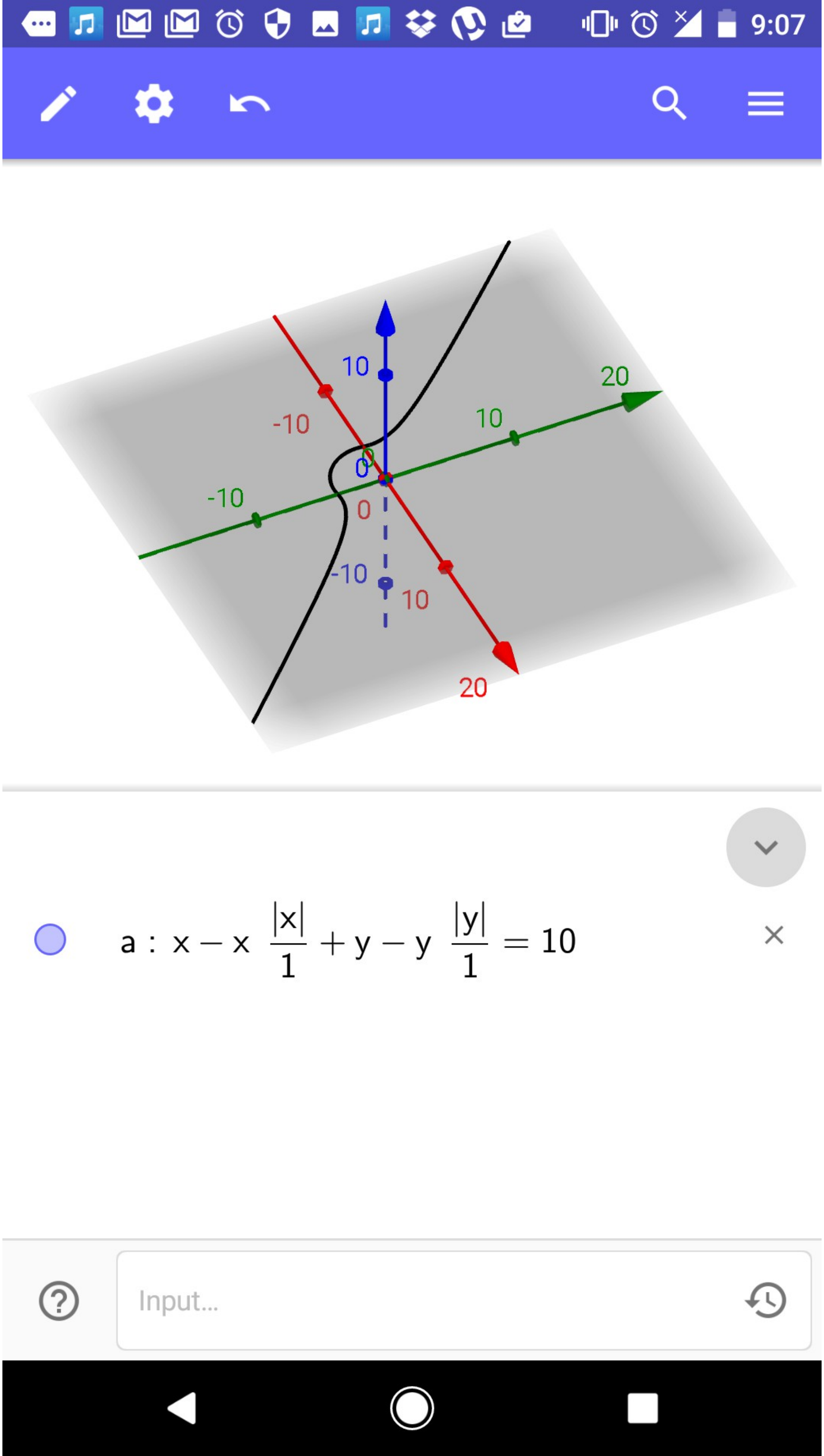
9:05 pm:

Rather for v' = 10c, v = -3.2...c.   So .... va + vb = 3.2c.   But more correctly. v'a + v'b = 10c.   So va (c - |va|) / c + vb (c - |vb|) / c = 10c... = va - va |va| / c + vb - vb |vb| / c = 10c ....

9:10 pm:

Which might be satisfied if both are getting true v closer at ~0.2c

Screenshot_20170512-210745.png

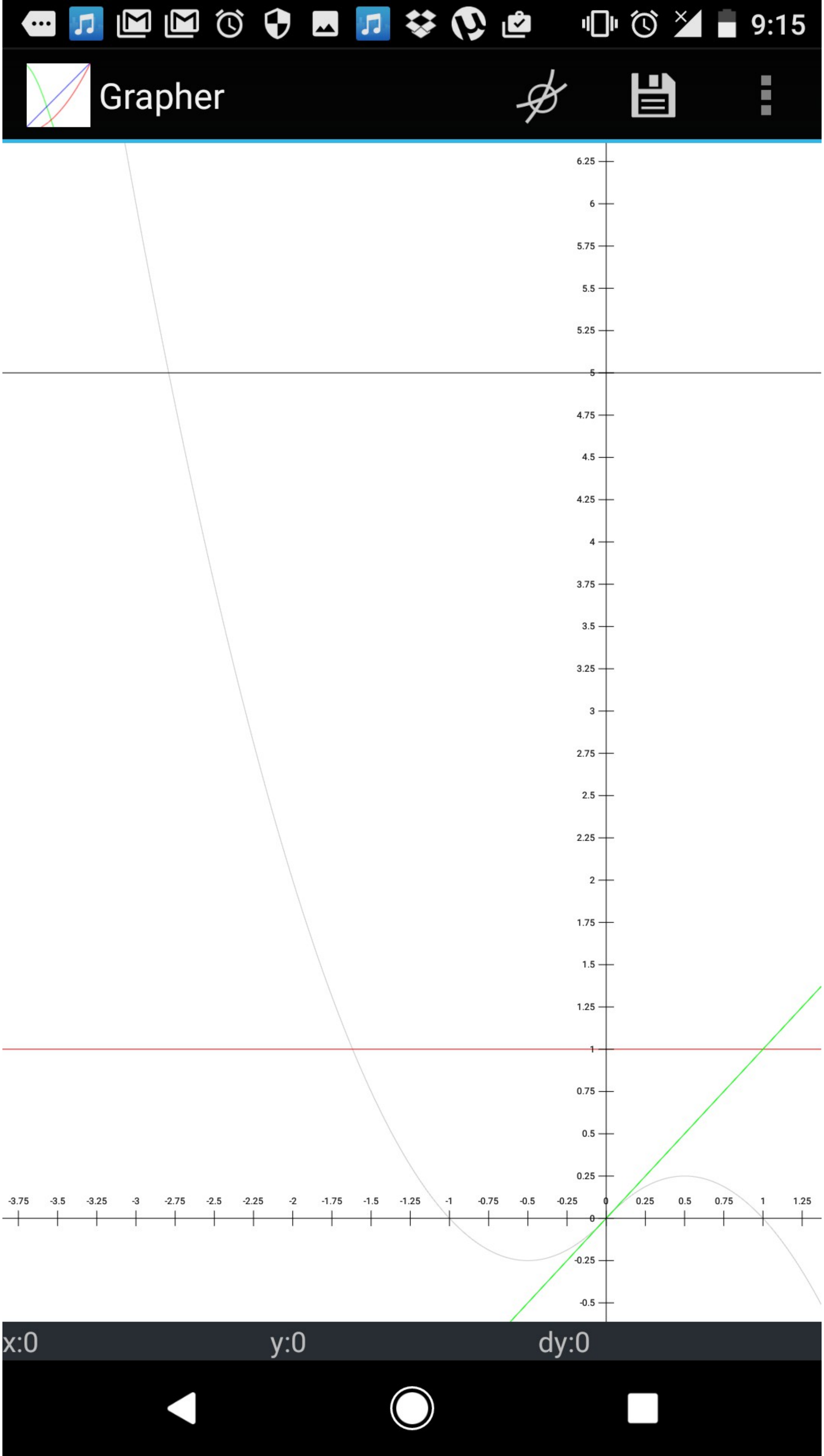


9:07
10
20
-10
10
0
0
-10
-10
0
10
20
$a: x - x\frac{|x|}{1} + y - y\frac{|y|}{1} = 10$
Input...

///////

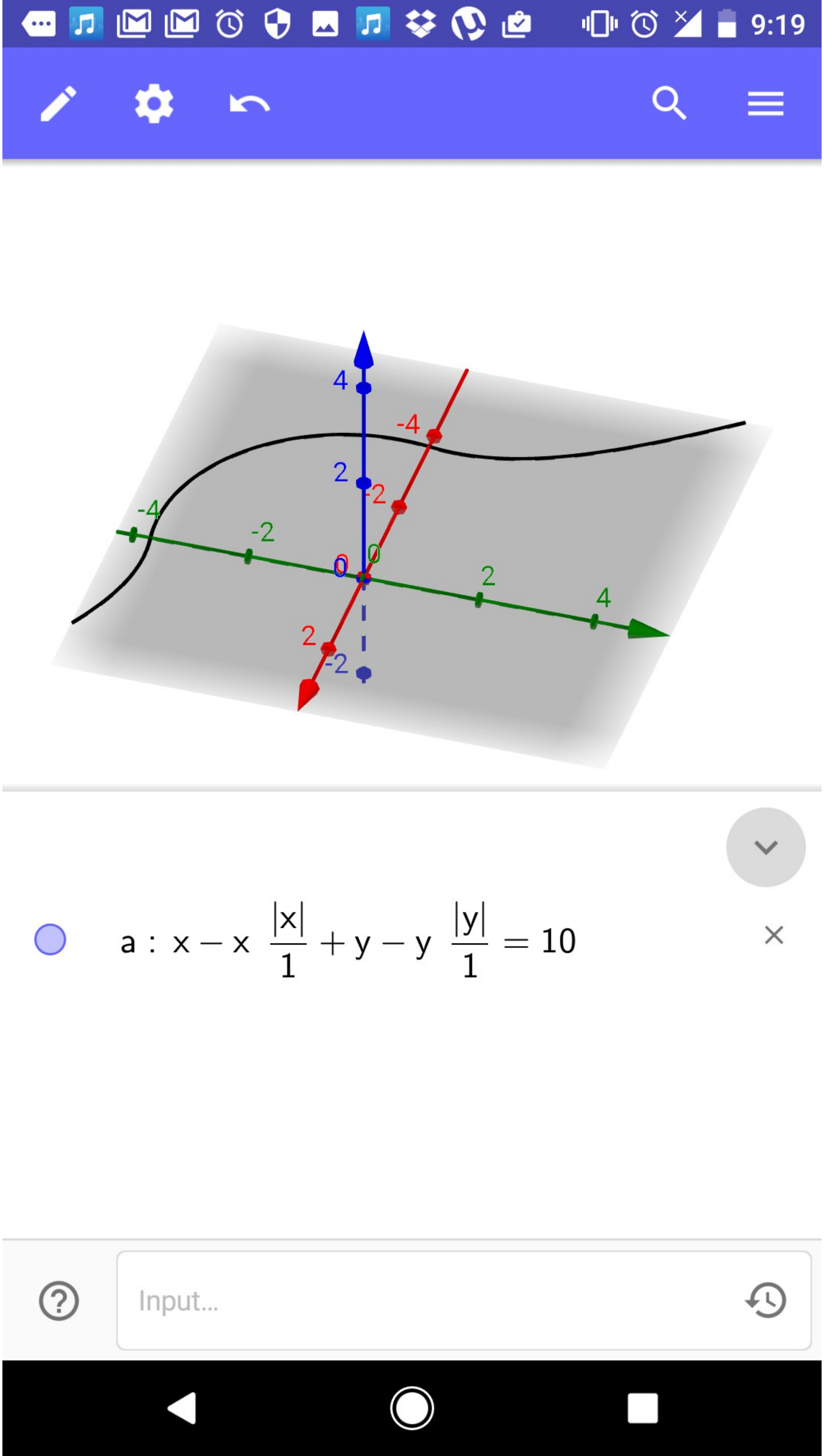
Or $v (c - |v|) / c = 5$.   So $v \sim -2.75c$.   And not -0.2c^^^ but ~-2c....

Screenshot_20170512-211530.png


9:15
Grapher
6.25
6
5.75
5.5
5.25
5
4.75
4.5
4.25
4
3.75
3.5
3.25
3
2.75
2.5
2.25
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
-0.25
-0.5
-3.75 -3.5 -3.25 -3 -2.75 -2.5 -2.25 -2 -1.75 -1.5 -1.25 -1 -0.75 -0.5 -0.25 0 0.25 0.5 0.75 1 1.25
x:0
y:0
dy:0

////

Screenshot_20170512-211927.png



9:19
4
-4
2
-2
-4
-2
0
0
0
2
4
2
-2
a : x − x |x|/1 + y − y |y|/1 = 10
Input...

//////////////

We thus have to get a difference of y on the graph |(v'a - v'b)| = 10c.   Perhaps also into the speed of light we have to factor in any net acceleration due to gravitation, perhaps giving a greater true c (outside of a gravitational net attraction etc, where there is "extra space" and a higher "refractive index" and thus slower c)

///

And this would probably mean gravitational dilation is a gamma that affects all directions, not just the direction of net attraction, so that light speed would be constant in all directions

But if escape velocity gravity t dilation compresses only in one direction then not only is c slowed there but so is our length compressed and thus our perception of light

If something is in a net gravity pull that causes a slowed c.... Shouldn't the c be fast enough adjusted automatically for any velocity or gravity net.... Wrong.   Net gravity giving the resulting v... To slow c...

And would have to mean c is greater away from us, closer to z11 glxy

Any changes in c due to gravitational time dilation would not affect f or lambda.... as both c and wavelength compress together... and frequency is the same...

“”Light changes speed as it passes from one medium to another. This is called refraction. The frequency of light does not change as it refracts. Refractive index of a material is a measure of the change in speed of light as it passes from a vacuum (or air as an approximation) into the material.””

Perhaps the greater gravitational time dilation we experience is due to the net pull of the gravitational rotation of the galaxy... ie the spiraling of the galaxy caused by the mass at the center, or ahead of us in the spiraling ring...

and in general the gravity closer to a galaxy would be stronger, and same closer to a planet, thus meaning the speed of light would be that much slower...

and because we're off on the side of the galaxy center, there is a great force pulling us to the center, but we have great momentum and velocity keeping us moving forward, with only a part of it being deflected by the pull toward the center.... thus there is a great net gravitational pull toward the center

if we are R light-years from the galaxy center, and are moving at V around the galaxy center, an acceleration A is needed such that (V t) ^ 2 - (A t^2) ^ 2 = - R ^2 and therefore a force of net of F = A M is acting on us, where M = our earth's mass and A = G M / R^2 and escape velocity is thus Vesc = sqrt(2 G M / R) = sqrt(A R 2) and therefore a gravitational gamma of (c true – Vesc) / c true perhaps equivalent to the refractive index at this point, (at least in the direction away from the galaxy center, causing a decrease in the speed of light in that direction, if the signedness of the direction along the escape velocity affects the gamma of gravitational time dilation and therefore if it causes a slowing down of light in the direction away from a net gravitational pull and a speed-up in the direction toward, and if the direction matters at all to gravitational gamma or if the gravitational pull causes an addition of escape velocity to all directional gammas of velocity)....
refractive index = n = c/v “”where c is the speed of light in vacuum and v is the phase velocity of light in the medium. For example, the refractive index of water is 1.333, meaning that light travels 1.333 times faster in a vacuum than it does in water.”” therefore n = c true / (c true * (c true – v esc) / c true) = c true / c apparent (at least in the direction directly away from the net pull)

and if “extra space” is “less density per particle” (for matter) (but “more density” for light, resulting in a slower light, where there is greater density, “extra space”).... then maybe particles are diffusing across a concentration gradient in this sense...

Gamma grav = c - (vesc vec - vesc vec * dot(vesc vec / mag(vesc vec) , - v vec))). So. If it shares length -0.5 with vesc, it will give dot = 0.5, multiplied by vesc vec. And subtracted from itself... Gives 0.5 of full vesc vec.... Using magnitudes then....

Gamma grav = (c - mag(vesc vec) * (1 - dot(vesc vec / mag(vesc vec) , - v vec))))

Medium front normal is the direction away from the gravity source whose denser or extra space medium is being entered. And ....shdbs

[phys 13 may 2017 images... waves wikipedia “Snell's law”]

If we want c apparent = (1/10) c true.... Vesc = (9/10) c true. In the direction away from glaxy center. And. Vesc = sqrt(2 G M / R). Where M is the total mass M pulling US toward the center.... And Vesc = sqrt (A R 2) = (9/10) c true. A R 2 = (81/100) (c true)^2. And if R = 1. Then A = (81/200) (c true)^2 / 1 (Length).

R = 2.49 x 10^20 meters
V = 200 to 250 km/s = 250,000 m/s

But also ""The Earth is moving by 30 km/s around the Sun and relatively to the Sun. The Sun is orbiting the center of our Galaxy, the Milky Way, by the speed of about 200-250 km/s. Our Galaxy is moving relatively to the Local Group where it orbits and the Local Group falls toward the Virgo Cluster of Galaxies.""

(V t)^2 - (R + A t^2)^2 = - R^2
- (R + A t^2)^2 = - R^2 – (V t)^2
R + A t^2 = sqrt(R^2 + (V t)^2)
A = (sqrt(R^2 + (V t)^2) - R) / t^2
 = (sqrt(6.2001 x 10^40 + 62,500,000,000 t^2) - 2.49x10^20) / t^2
= (sqrt(6.2001000000000000000000000000063 x 10^40) - 2.49x10^20)   t = 1 s
= (sqrt(6.2001 x 10^40 ...) - 2.49x10^20)
= (249000000000000000000.00000000013 - 2.49x10^20)
= 248751000000000000000.0000000001
= 2.48751x10^20 + 1 x 10^-10   m/s^2 <<<<<

= 2199023255552 * sqrt(12821506289725070) - 249000000000000032768
= 2199023255552 * 113232090 - 249000000000000032768
= 249000000000000027019 – 249000000000000032768
= -5748.5132972944185660942782796622

= - 2199023255552 * sqrt(12821506289725070) - 249000000000000032768 XX

t = 1 s
(A + 249000000000000000000)^2 = 249000000000000000000^2 + 250000^2
A^2 + A 498000000000000000000 + 6.2001e+40 = 6.2001e+40 + 62500000000
A^2 + A 498000000000000000000 + 6.2001e+40 – 6.2001000000000000000000000000063e+40 = 0
A^2 + A 498000000000000000000 - 60000000000 = 0

A = (- 498000000000000000000 +/- sqrt(498000000000000000000^2 – 4 * (- 60000000000))) / 2
= (- 498000000000000000000 +/- sqrt(2.48004e+41 + 240000000000))) / 2
= (- 498000000000000000000 +/- sqrt(2.4800400000000000000000000000024e+41))) / 2
= (- 498000000000000000000 + 498000000000000000000.00000000024) / 2
= 2.4096399566617683883876922547362e-10 / 2
= 1.2048199783308841941938461273681e-10 m/s^2 <<<<<<<<<<<<<<<

Therefore there is an acceleration of 1.2 x 10^-10 m/s^2 toward the galaxy center.

XXX   (10^20 + 10^19)^2 = (10^20)^2 + (250000)^2   =>   1.1x10^20   =>   1.21x10^40 = 10^40 + 6.25x10^10 …. XXX   (A + R)^2 = R^2 + V^2   =   5x10^40 = 6.25X10^40 + XX
(A + R)^2 = R^2 + V^2   =>   (2.4975 x 10^20 + 2.49 x 10^20)^2 = (2.49 x 10^20)^2 + 62.5 x 10^9
=>   = 6.2001 x 10^40 + XXX   (-5748 + 2.49x10^20)^2 = (2.49x10^20)^2 + (6.25x10^10)^2XXX
(248751000000000000000.0000000001 + 249000000000000000000)^2 =

249000000000000000000^2 + 250000^2 =>
A = -498000000000000065536 = -4.98 x 10^20 m /s^2
XXXX

This is even less significant than the sun's gravitation. If we needed c true = 10 c apparent,

(c true – vesc) / c true = 1/10 = 1/n our space
vesc = - (1/10) * c true + c true = (9/10) c true
if c true = 10 c apparent, then,
vesc = 9 c apparent

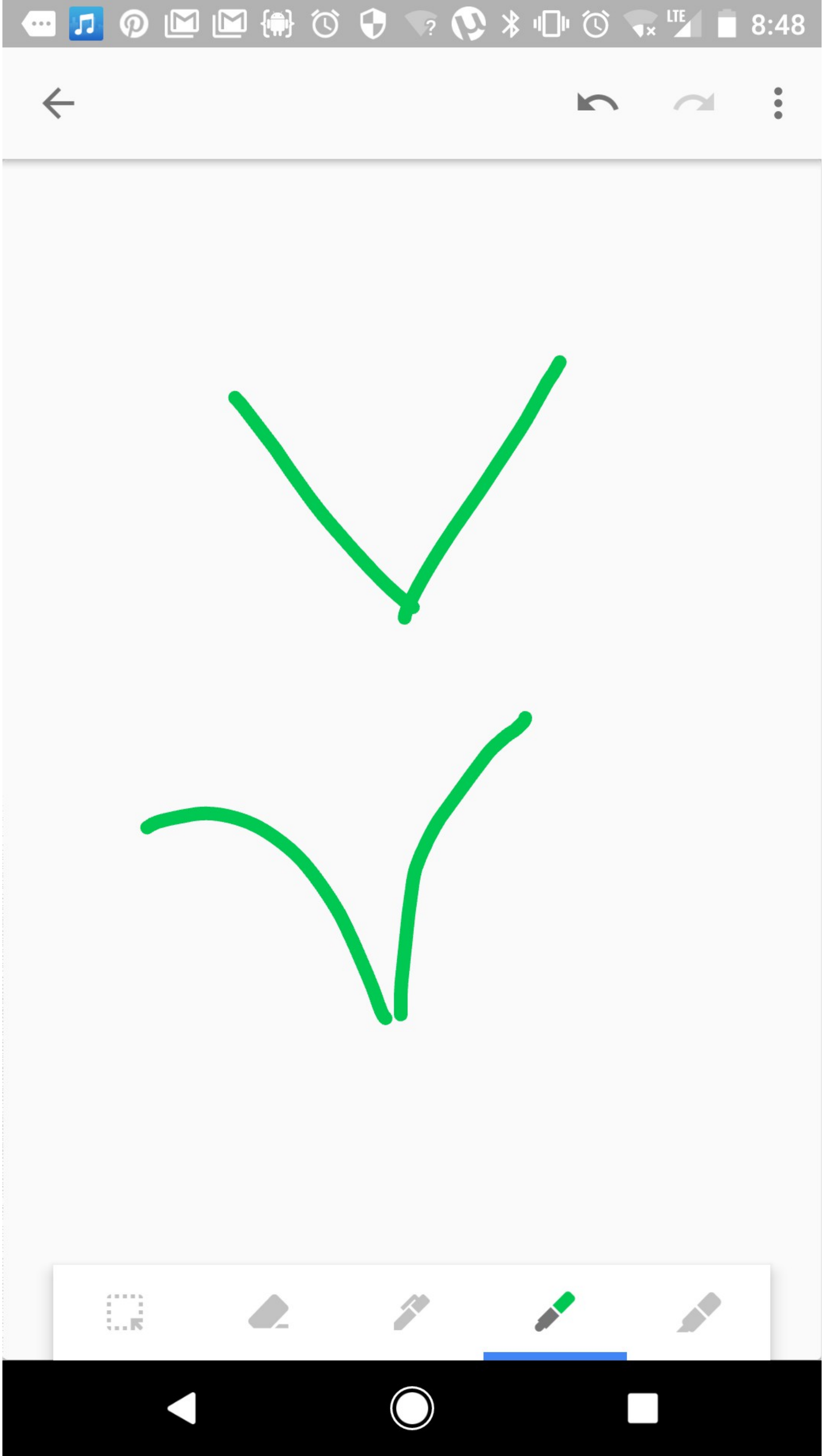
Solutions:Step-by-step solution
a = Can solve for cos sin etc without calculator using cos (x pi) = (-1)^x
And recognize that x^a = x^b / x^c. Where a = b - c.... And you can turn (-1)^(1/3) into (-1)^(... Or by x^a = (x^b)^c. Where a = b c.... 1/3 = 3/3 - 2/3 = 1 - 4/6.... = >.
Open code

Combine electric charge space and acceleration gravitational space into one field or curvature and perhaps using 6 whatever dimensions, but in a way to make them united by relating the values of charge and acceleration. And derive properties from it.

If the light speed is receiver only then have c' in triangle for all....

If points curve inward
Then there should be more detail at farther distances than just perspective projection

Screenshot_20170514-204821.png


LTE
8:48

Maybe 3.01 dimensions a little extra than just 3 euclidean dimensions

Is rather curvature not dimensions eg if meet up lines not dimensions

λ

Also how can light refraction in a denser material or bend or slow if it is travelling in the spaces between atoms and particles if not that gravity and electricity of particles affects light ie by gravitational refraction that being so close to gravitation bodies closely packed does to it

Solids mostly have such high density that the gravitation is too great for light to pass through due to gravitational refraction
Mirrors and glass have certain special properties with regards to visible light that allows them to bounce back or pass through light due to the timing and mechanics of the orbital periods and interactions with other electrons
Gases are mostly transparent due to the low density

174: may 14:

aa100.png e1, e2, e3 top to bottom $v1 = 0$, $v2 = 0$, $v3 = 0$ measured distances D12, D23, D13

aa101.png e1,e2,e3 $v1=0,v2=1/2,v3=1/2$ $D12' = D12$; $D23' = 2 D23$; $D13' = D13$; $D21' = 2 D21$; $D32' = 2 D32$; ? $D31' = 2 D31$? Dab = D a-to-b, in a's POV vab = relative v of b's – a's in a's POV in terms of Dab, not Dab' "how much am I (a) moving relative to b?" $v12 = +1/2$; $v13 = +1/2$; $v23 = 0$; $v21 = -1/2$ $tc1(x1) = tc(x1,x0)$ = time that light arrives at x1 from x0, in global time (light crest arrival?)

tc(x3,x3 - ..... tm(a,b,c,d) = how much or what time to arrive at a, from b, with velocity c, in d's POV

$z=x*(2-|x|)/2 + y*(2-|y|)/2$

https://www.wolframalpha.com/input/?i=z%3Dx*(2-%7Cx%7C)%2F2+%2B+y*(2-%7Cy%7C)%2F2

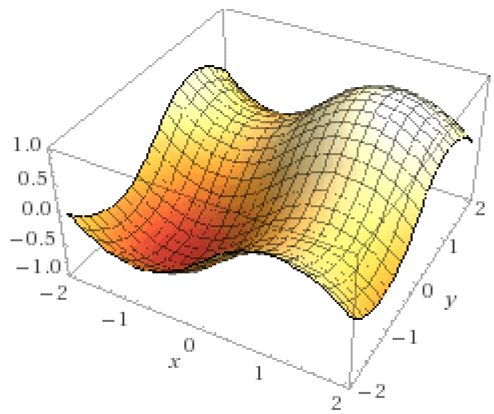
asd.PNG

z=x*(2-|x|)/2 + y*(2-|y|)/2

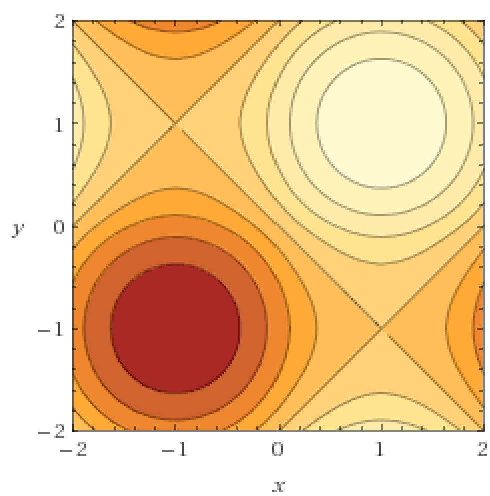
Input:

$$z = x \times \frac{2 - |x|}{2} + y \times \frac{2 - |y|}{2}$$

3D plot:

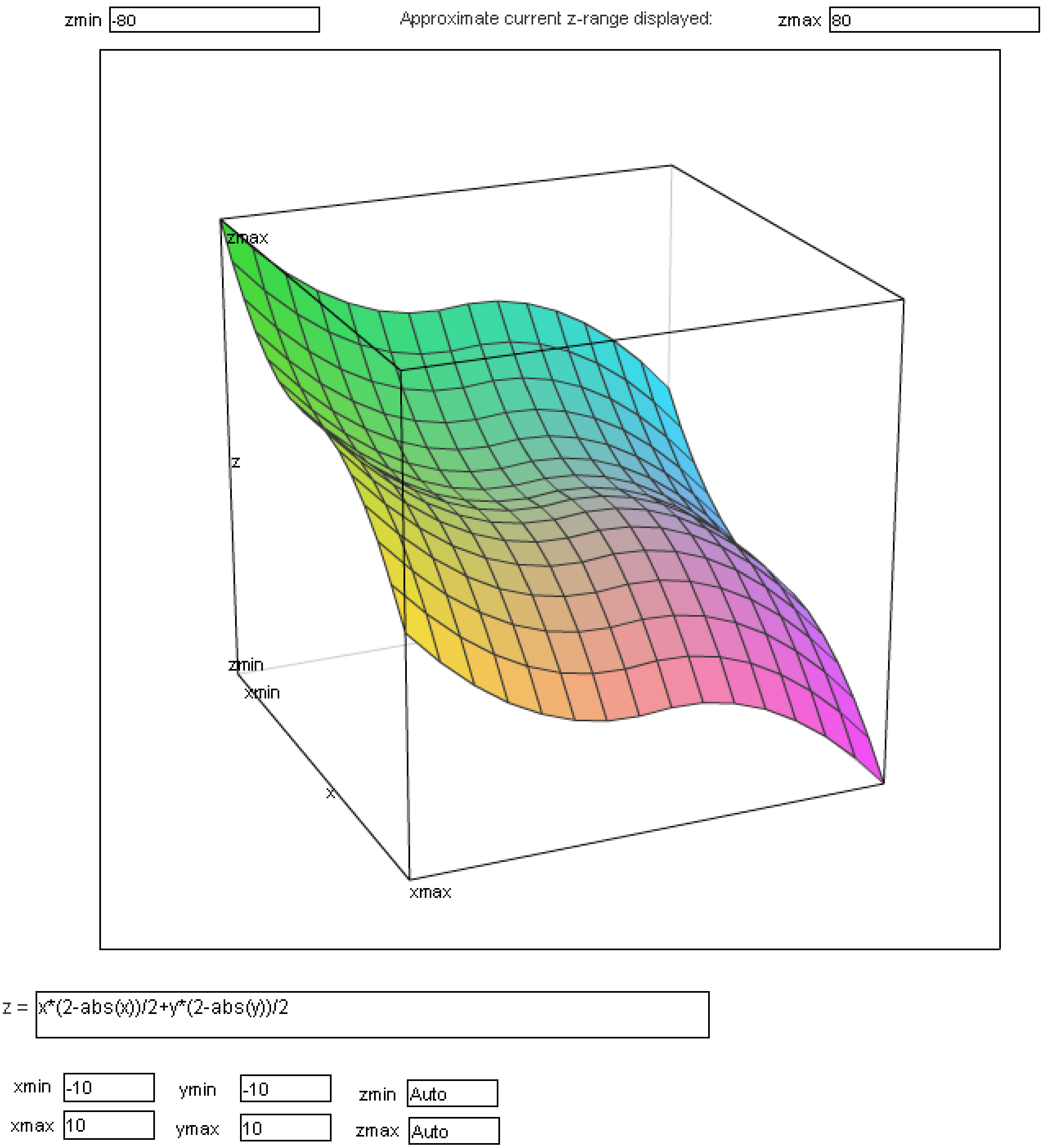


Contour plot:



http://www.livephysics.com/tools/mathematical-tools/online-3-d-function-grapher/?xmin=-10&xmax=10&ymin=-10&ymax=10&zmin=Auto&zmax=Auto&f=x*%282-abs%28x%29%29%2F2%2By*%282-abs%28y%29%29%2F2

aaa.PNG



refractive projection

if space and time change places in a black hole, does light's frequency (time) change with wavelength (space)?

If in the hole they change place, and the effect of any gravity is to bring the time and space closer together, and eventually apart the other way as in a hole, then maybe the effect of dilation is the dilation and space, together to give some velocity and distance '
as you get closer to c, and t'->0, the angle of effective speed or dilation of distance change, to the dilation of time, becomes such that as you move faster, you start traveling less in space, and more in time, until you stand still or exceed, and effectively the time axis ' gets closer to space axis etc.

What a pile of yammering bull plop! Set up the problem yourself:

t' = gamma*(t - v*x/c^2)

Let x = v*t

Substitute:

t' = gamma*(1 - v^/c^2)*t = t/gamma

No x in the final result, yet x is DEFINITELY involved in the derivation.

Of course.

Are you struggling with "locus of events" here? This is similar to a "locus of points" except it includes the time coordinate.

A path of constant t is a horizontal line on a space-time diagram.
A path of constant x is a vertical line on a space-time diagram.
A path of constant x is a line parallel to x/ct=v/c
A path of constant t is a line parallel to x/ct=c/v

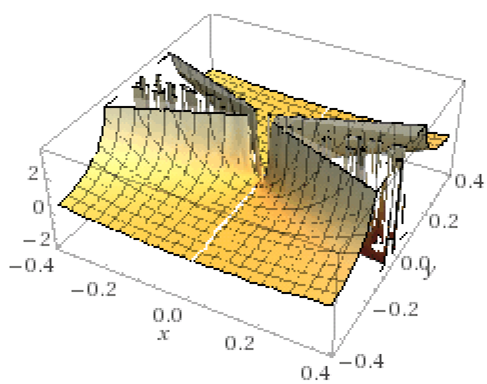
v' = v gamma?   t' = t gamma?   v' = x/t = v gamma   t' = t / gamma   v' = (v/|v|)*(...c - |v|) t' = (t/|

v|)*(...)   x' = (x/|x|)*(c - |v|) /c?   t' = (t/|t|)*(c - |v|) /c?   v' = x'/t'   t = 1s'/1s x=delta   t = (c/1 m) …. (c * 1 sec)'/1sec   xCXXX = (c * 1s)   (x/|x|)*(2-|x|) = (y/|y|)*(2-|x|)
t = (c - ((c * 1 sec)'/1sec))   c*y sec....   (x/|x|)*(2-|x|) = ((2 - 2*y)/|(2 – 2*y)|)
x^2 + t^2 = c   λ^2 + P^2 = c.....   λ(1/P) = c   x(1/t) = c   x' = (c-|v|)*x + t*(|v|-c)   x' = (c*1s)*sin((pi/4)*(v/c))   t' = (c*1s)*cos((pi/4)*(v/c))   x*sin((3.14159/4)*((x/y)/2)) / (y*cos((3.14159/4)*((x/y)/2)) ….. = x/y   x'/y'?   aaaa.png

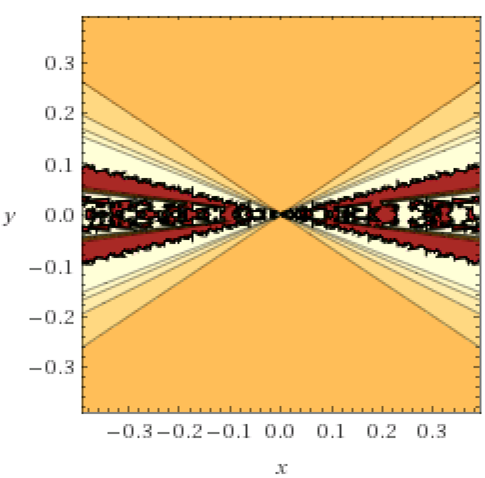
Result:

$$\frac{x\tan\left(\frac{0.392699\,x}{y}\right)}{y}$$

3D plot:



Contour plot:



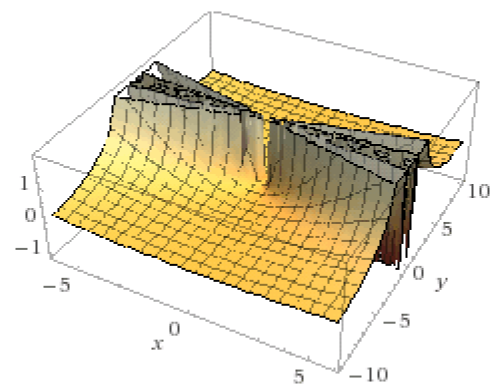
x'/t' = sin((3.14159/4)*((x/t)/c)) * (x/t)

aaaa2.png

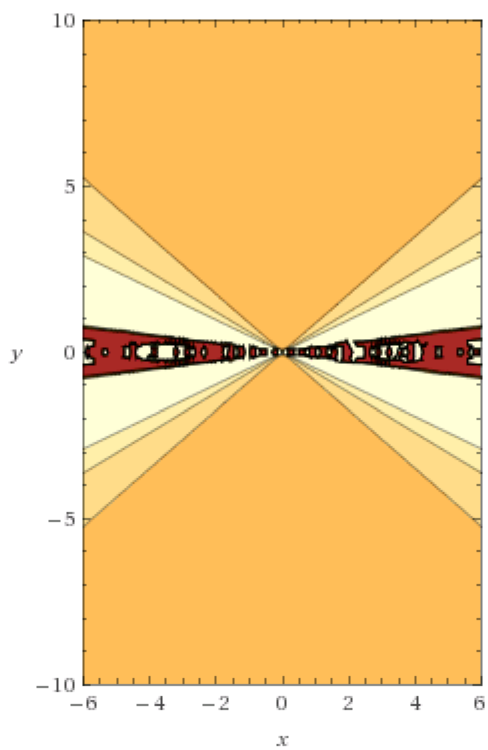
Result:

$$\frac{x \sin\left(\frac{0.392699\, x}{y}\right)}{y}$$

3D plot:



Contour plot:



$(\sin((3.14159/4)*((x/y)/2)) * (x/y)) * (2 - |(\sin((3.14159/4)*((x/y)/2)) * (x/y))|)/2$

$vp = (\sin((pi/4)*(v/c))) * v$
$v' = vp * ((c - |vp|)/c)$

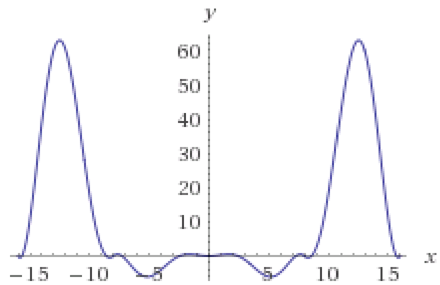
$(\sin((3.14159/4)*((x)/2)) * (x)) * (2 - |(\sin((3.14159/4)*((x)/2)) * (x))|)/2$

aaaa3.png

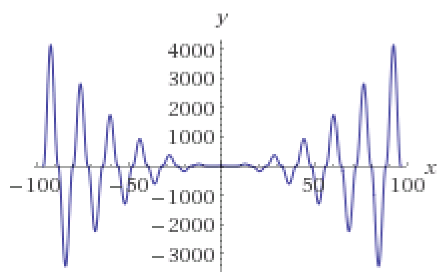
Result:

$$\frac{1}{2} x \sin(0.392699 x) (2 - |x \sin(0.392699 x)|)$$

Plots:



(x from −16 to 16)



(x from −96 to 96)

Alternate forms:

$$-\frac{1}{2} x \sin(0.392699 x) (|x \sin(0.392699 x)| - 2)$$

$$x \sin(0.392699 x) \left(1 - \frac{1}{2} |x \sin(0.392699 x)|\right)$$

$$\frac{1}{2} x \sin(0.392699 x) (2 - |x| |\sin(0.392699 x)|)$$

(x'/t') = (x/t)/(|x|/|t|) * ((c - |x/t|)/c)

Reverse atomic light mapping.   Ie using light and frequency and amplitude and view angle to get the electron velocities and distributions and reconstruct the arrangement

Photon link.   Each electrons shoots out waves of photons in each direction that split off auto and decrease amplitude by counting distance and are linked so they can interfere like waves and if one is absorbed they talk to the other neighbors and can have absorbtion directed

Fall by inverse square law amplitude ie amount of photons caught

When electron absorbs at eg radius 2, the amplitude amount is K/2^2 and the "shadow" cast by that electron is proportional to the amount of surface area of total at that point, I amplitude of total, regardless of electron radius

Smoothed over hole of absorbtion that is also a pattern of inverse square along surface that grows as wave grows but has a total amplitude missing equal to the absorbtion

How light waves are caught by radio telescopes even though they have holes in them but not bigger than the wavelength

And how microwave meshes trap all microwaves even holes

Train. Example simultaneity.   Does speed effect receive time.   Or just distance.

So photons expand and multiply as they get farther and never smaller than wavelength and if something catches photon it will cast a shadow of that size and greater by radial expansion angles

Absorbtion of photons depends on frequency and velocity of electron. The greater the frequency relative to the electron head on the greater the likelihood it will be absorbed ......

The hole needs to propagate too and gravitationally refract as there is a smoothed trail around the hole and to know how far it extends or the amplitude at a reception point needs to be known the path of the hole

Ghost

Use deceleration and velocity vector, using them by themselves and their cross product, to orient the starting photon grid for emission The radius of emission must at least accompany a photon or more of that wavelength Therefore it may naturally be far enough from a point-like source of infinite gravity force to not encounter a pulling force with escape velocity c The closer the deceleration and velocity vectors are together or parallel, the more If the angle is 90 or equal then a cross product or the vectors by themselves can be used if they are parallel though, perhaps an x and y angle can be picked to depend on the ratios of the acceleration to deceleration velocity eg if maybe the starting grid is picked so that a cone or sweeping background that angle picks a ring to align or depending on accelerations gravity etc around vectors

and orbitals absorbption energies frequencies of dif chems electrons ie certain frequency not too high not too high corresponds with eg electron velocity or head-on vel

Me: Step 2 is the arrival of the photons at the speeder's car at (c + v)

Other guy: [car at (c + v)] is TRASH, (c+v) Negates all of Relativity....

Me: No, it doesn't. It just negates the "MATHEMATICIANS' ALL OBSERVERS THEORY" of relativity. READ MY PAPER!

Other guy: If [car at (c + v)] then there would be NO REFLECTED PHOTON TO CALCULATE THE VELOCITY

Me: There obviously IS a NEW photon to calculate velocity, so you are clearly misunderstanding something.

Other guy: [car at (c - v)] is Much More Workable if the Car was Always considered to be at the event horizon, trying to Accelerate away form the event horizon. Your Brain is Filled with TRASH

Me: There is no "event horizon" involved in a police officer catching a speeder. Your brain is evidently filled with memorized TRASH that is irrelevant to this discussion. It is confusing you.

Other guy: (There is no "event horizon" involved in a police officer catching a speeder.)
FOOOOOL !!! There is Always an Event Horizon Between The Future & The Past ....   This EVENT HORIZON is called the "PRESENT" What a Stupid Donkey you are. My Mother's Donkey is Smarter than you …

MAY 1905: LIGHTNING STRIKES A MOVING TRAIN
Einstein’s revelation was that observers in relative motion experience time differently: it’s perfectly possible for two events to happen simultaneously from the perspective of one observer, yet happen at different times from the perspective of the other. And both observers would be right.

Scalar field

MistySaa said: ↑
What are 'gravity wells' if not contraction of spacetime?
In the simplest case, a static "gravity well", it can be visualized as a bowl, with the gravitating mass filling the bottom of the bowl. The "amount of space" in the bowl is, if anything, "expanded" compared to flat spacetime, not "contracted". (Note that this is still a highly heuristic picture, which has significant limitations; but it at least gets across one key aspect of how a "gravity well" works.)

MistySaa said: ↑
Is the 'curvature' concept something else entirely? Do you have a visual/spacial concept of the 'curvature', or do you basically rely on a very functional/abstract conceptualization?
Spacetime curvature is tidal gravity, which has a direct physical realization. In the simple case of a static, spherically symmetric mass, tidal gravity has two main components, radial and tangential.

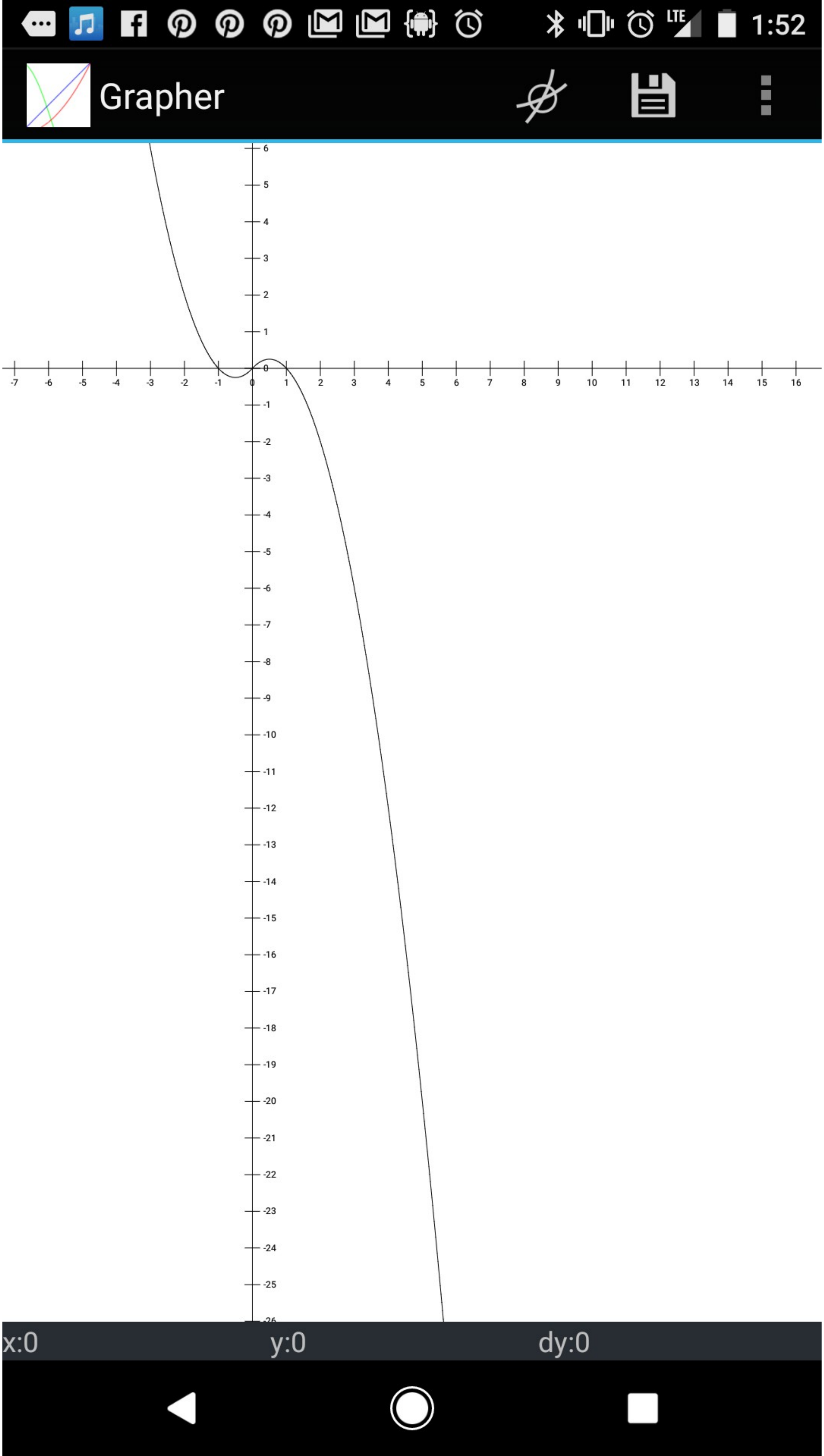
For the radial case, imagine two rocks high above the Earth, at slightly different altitudes but along the same radial line, that get released from rest at the same instant. The two rocks will slowly diverge (i.e., get farther apart), because of the slight difference in the strength of the Earth's gravity between their altitudes. This corresponds to negative spacetime curvature.

For the tangential case, imagine two rocks high above the Earth, at the same altitude but slightly separated tangentially, that get released from rest at the same instant. The two rocks will slowly converge (i.e., get closer together), because of the slight difference in the direction of the Earth's gravity between them. This corresponds to positive spacetime curvature.

Looking up at the clouds would be the opposite of looking down on the earth from space... ie, like origin rays (rays from the eyes) would be directed around inward, not outward, or perhaps generally curving either up or down with a 45 angle

Looking at the red-shift of GN-z11, the v'=-11c for z=11, means a v=4.

Screenshot_20170517-135215.png


1:52
Grapher
x:0
y:0
dy:0

In the example aa20.png, we can also use contour lines, instead of perpendicular walking lines. In the case of two masses, the perpendicular lines would pass horizontally between two vertical mass, but the contour lines would connect and go vertically somewhere, where the acceleration magnitude is the same. We can thus also use contour lines for walking, for acceleration, energy, force, charge spaces and combined electromagnetic wave amplitudes.

How does gravity dilate time?
Richard Muller
Richard Muller, Prof. Physics UC Berkeley, author "Physics for Future Presidents"
Answered Nov 13, 2015
Originally Answered: What property of gravity causes time dilation? I believe this is the secret to speeding up and slowing down time.
Einstein considered gravity to be equivalent to acceleration. If you ignore all gravity, but accelerate a box, then you can calculate (from Special Relativity alone) that the clock at the front of the box is running faster than the clock at the back.

Since gravity is equivalent to such an acceleration, that means that time goes faster as you rise in gravitational potential, that is, as you go upstairs.

If accel is grav... if g..a.... it is like a leading to higher and higher v.... so g leads to higher and higher v, not just vesc?

From the previous to the first gamma and v1' to v2', there will be more dilation is time result of electric and gravitational repulsion and attraction ie opposites ie proper acceleration in resistance to gravity and no time passes for greater repulsion attraction no vel and no g means younger no time going and greater means OLDER no vel -time no g time nnt

maybe protons don't combine with electrons because of repulsion at a close enough radius when the radius approach size s, the attraction turns to increasingly increasing repulsion, F = G M / r^2 – G M / /...........r)^2

RichD wrote
And now, finally, the $64 question: what IS time, scientifically?

$(((1 \text{ meter}) * 1 \text{ kg}) / (1 \text{ newton}))^{0.5} = 1 \text{ second}$

Time = Gravity

F = ma, multiplying m (kg) by a (m/s2)

effected by gravity, accelerated, greater speed, more time, or, effected by gravity, gravity dilation, less time....

Acceleration is relative too, if it is only felt by a compression between the particles of an object, and really acceleration of a particle is just gravity or electricity

David (Lord Kronos Prime) Fuller

6:20 AM (2 hours ago)

$((\text{Distance} * \text{mass}) / \text{Force})^{0.5} = \text{Time}$

$(\text{Distance} * \text{mass}) = \text{Gravity} * \text{Time}^2$

$(\text{Distance} * \text{mass}) / \text{Time}^2 = \text{Gravity}$

David (Lord Kronos Prime) Fuller

6:23 AM (2 hours ago)

Gravity * Time^2 = Gravity/c^2 = Scwartzchild Radius *0.5

> > OR
> > 2. A second on a moving clock is worth 1/gamma seconds on the observer’s
> > clock.
>
> You're not thinking cogently. Put the observer on the "moving" clock.
> The "stationary" clock is now the moving clock, so the original clock's
> second is now I/gamma seconds of the original "moving" clock. So each
> clock is running slower than the other clock. Yhus your assertions
> make no sense.

t' 1/t'   v   -v   T/t   t = (c-v)/c   T=c/(c-v)   t=(c+v)/c   …

If the universe is expanding, and light travelling from andromeda actually travels faster, with the expansion added to its speed, with its front and back points being stretched out, it wouldn't work because the front and back should skip over the expanded space... our space would also be expanded, unless we contracted back to the original distance, while light did not,   if light did not, it would appear to move faster

from GN-z11^^^

How did Einstein arrive at his Equations for General relativity?
What was the line of thought that led him to postulate that Gravitational field strength is the curvature of spacetime? Were there hints of it in Newton’s laws or in Special Relativity?
Kirsten Hacker
Kirsten Hacker, studied Accelerator Physics
Answered Mar 24
When you understand how moving charges act, it makes sense to speculate that moving mass will have similar properties. Drawing analogies with electromagnetism, Heaviside speculated about gravitational waves in 1893 and Poincare refined this speculation in 1905. Ten years after taking a class from Minkowski on field equations for electric charge, Einstein completed the foundations of general relativity by the summer of 1912, the year that his relationship with his wife started to disintegrate. Kirsten Hacker's answer to Did Albert Einstein steal the work on relativity from his wife?

His friend Grossmann delivered a couple more steps to his derivation of the field equations in 1913 at which point Einstein stalled. https://arxiv.org/ftp/arxiv/pape... http://www.mpiwg-berlin.mpg.de/P...

http://www.mpiwg-berlin.mpg.de/Preprints/28/Preprint_28.html#683689

https://arxiv.org/ftp/arxiv/papers/1310/1310.6541.pdf

Is it true that a charge is the result of work done in separating electrons and protons?
Read this in a book by professor Grob. Doesn't seem quite right to me.
6 Answers

ie measure of charge   and it seems like force then   e

if gravity travels in waves at the speed of light   if the earth is moving around the sun and the sun disappears how long does it take for the earth to feel the gravity disappear   if also the earth and sun are moving with respect to a stationary other object then how do they experience it, will the waves reach the object or the earth first what do the waves travel relative to and if it is the object moving how does it change its relative

see gravity waves ping-pong times amplitudes passing and in time that sun dissappears pongs still coming back for some time

gravity ping-pong amplitude times space like others

gravity can't be absorbed or shadowed, so no wavelength or graviton size.... but if it is approaching then blue-shift frequency based on a base frequency 1 where the two objects are at rest

maybe the speed of gravity is much greater than light and so gravity escapes black holes where refraction gives $v' = v - v_{esc}$

Maybe for a photon to be absorbed the change in the velocity is deceleration that emitted it has to equal the one of the absorber.

Maybe going back to the idea of a particle that always travels with speed light. And perhaps mass given by it's energy content and momentum. Can calc. Deflection by gravity as the acceleration experienced by such a particle, with the resulting speed being then normalized back in the new vector.

Simulate a lattice of electron atoms pretty much infinite amount by making a small lattice that is in a repeating cubic space that doubles on itself left right up down etc

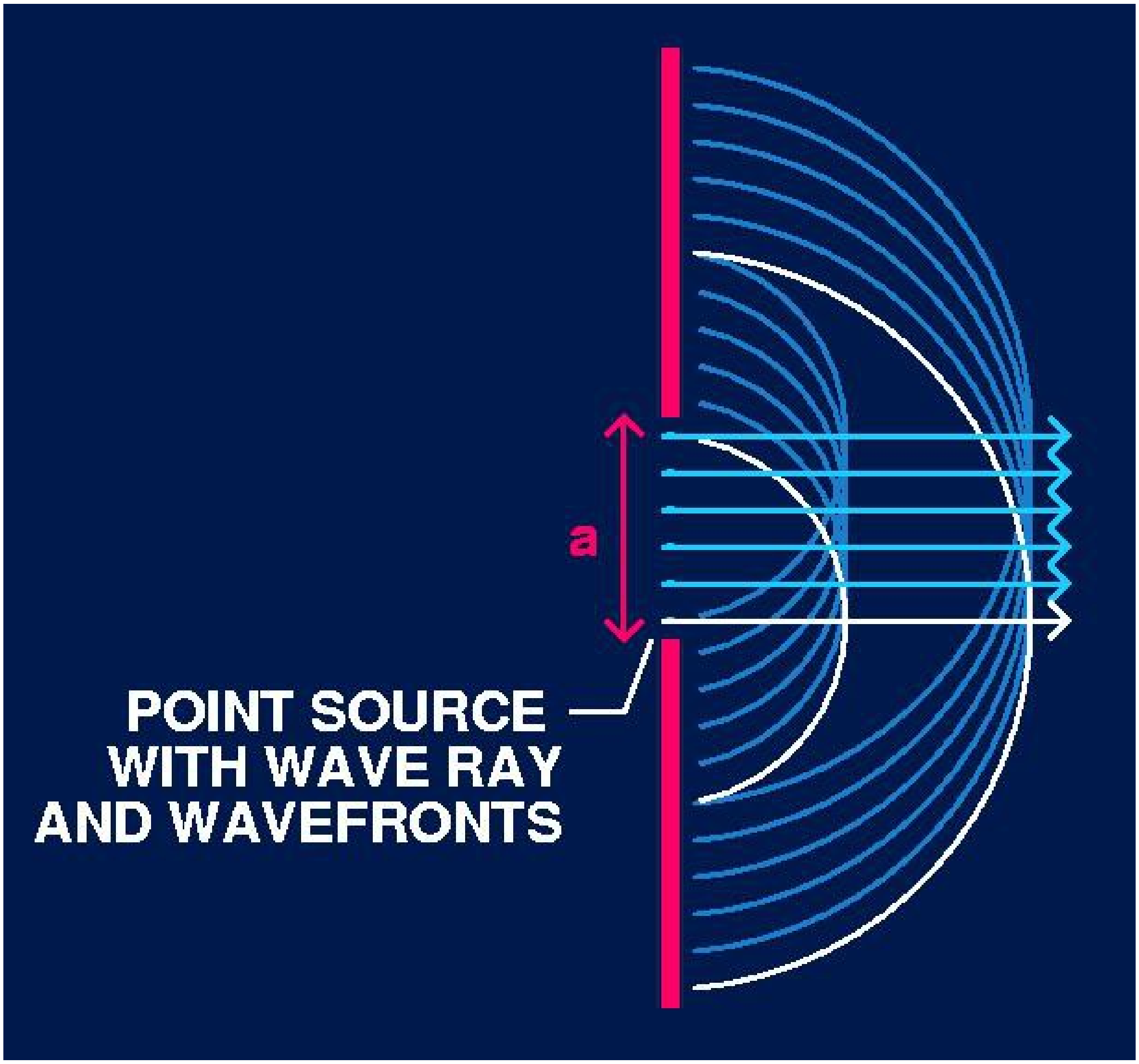
Make 3-sphere in 4-space skew axis

Skew axis addition vs skew axis interaction. In first the axes shouldn't be subtracting from themselves or they can but...

using an array of antennas or radio telescopes, each approximately a football field apart (the wavelength of radio waves), we can create a “radio camera”. If directed slightly outward like the eye or lens, it would receive an image like the eye, a “radio image”. If directed straight in one direction, they would be akin to an orthographic projection. If directed toward a certain distant origin, they could act as an amplifier and “microscope”. To actually work as a camera to capture an image they would also need to be elongated, with a metallic cylindrical covering that prevented photons of other directions from entering and activating the receiver, like rod and cone cells in the eye. And using the similar electrical principal of radio antennas, we may be able to build image receivers that distinguish and receive all the frequencies of the visible spectrum, not just filters of red, green and blue, a “light antenna”. If radio waves or particles are the sizes of football fields, it makes sense that they should be blocked by a simple car antenna or metallic surface, but it appears that they are bounced around in the atmosphere and off of metal surfaces, and that the photons split as they travel, in the amount that would be expected if they were simply radiating spherically. Instead of building a cylindrical cover, a much simpler design can be used by placing four metallic rods emanating from the same side as the receiver, to act the same way as the cylindrical cover, and can be adjusted by length to adjust the field of reception angle allowed.

The radio waves would also diffract around obstacles, and the rule may be that photon-linked neighbors in the lateral would expand to give them an equal distribution angle, with the free space available and the angle of the previous photon(s) absorbed. From water diffraction generated by a planar wave passing through a single slit, there is an angle of strong amplitude closer to the front of the direction of movement, and a decreasing amplitude approaching zero directly sideways radially from the slit. If the exact angle depends on the wavelength, we can think of the diffraction through a slit, or the bending of a wave around a corner as happening constantly, where in a radial wave the photons just redistribute themselves, the resulting amounts being equal. However, it appears the same is not the case for planar waves. It does not appear planar waves are possible with electromagnetic waves, unless they are radial waves from a far distance. Diffraction should only happen then when the hole size approaches the wavelength or smaller. The angle to diffract and the distribution can likely be calculated by calculating the lateral number of neighbors in the photon link.

Point1.jpg



“”

Consider a slit of width a, light of wavelength l, and a smaller than l.

When the light encounters the slit, the pattern of the resulting wave can be calculated by treating each point in the aperature as a point source from which new waves spread out.
“”

It appears this is the case whenever a single photon in a row of photons is absorbed.

The amount of amplitude that passes through a slit of diameter a is equal to Bethe's $(\frac{a}{\lambda})^4$ where

$a<\lambda$ and so we might expect that much of a photon's amplitude to pass around or through an absorber. The component of the wave experienced or emitted by an electron in the direction from the emitter to the absorber may be seen as the phase of the electron's orbit and the changes in acceleration, where a deceleration away represents a trough, and an acceleration towards, indicates a crest, and may be expressed by $v=\frac{dcos(t)}{dt}=\sin(t)$ where t is the angle or phase around the center of rotation, and v is the change in position, and $a=\frac{d}{dt}\sin(t)=-\cos(t)$ is the acceleration, where $x=\cos(t)$ indicates the position of the electron along the x (transmission) axis. Any point breaking in the propagating wave-front can be treated as a slit, where the slit is simply the arc of the wave-front around the breaking, and the resulting path difference given by $\sin(T)=\frac{\lambda}{a}$. And the points of zero intensity would be given by $a\cdot\sin(T)=m\cdot\lambda$, etc., where the planar surface is curved to fit whatever radial angle is needed.

sin(A + B) = sin A cos B + cos A sin B

cos(A + B) = cos A cos B − sin A sin B

The result of the fact that amplitude phase of a wave is proportional to the velocity relative to a receiver, from above, the emanating crests and amplitudes would appear to be spirals. A wave segment doesn't know it's own frequency, but we can say that if the amplitude change is Δa , over segment Δt , and the amplitude is a , $a'=-\cos(t)$, $\Delta a=-\cos(t)+\cos(t-\Delta t)$, $a=-\cos(t-\Delta t)$, $0=-\cos(t)+\cos(t-\lambda)=a'+\cos(t-\lambda)$, $\cos(t-\lambda)=\cos(t)=-a'$, and $\cos(t-\lambda-\Delta t)=\cos(t-\Delta t)=-a$. For a microwave oven or radio wave telescope, the spaces between the electrons would be much too low for a wavelength to diffract, the holes in the absorbing material would be big enough. For a much smaller wavelength, we might expect the space between electrons to act as a diffraction grating. The space between electrons matters, not the size of electrons, for diffraction. For iron, with the size of the atom and thus spacing between the electron and nucleus, nano-Hertz and higher frequency microwaves would come close to penetrating and more easily passing through the spaces wholly. With a density of $9.05\times10^{16}\frac{atoms}{m^3}$, a separation of $1.1\times10^{-17}m^3/atom$, the nano-Hertz wavelength of $10^{-19}m$ would have even more trouble passing.

If light slows down in a gravitational field, directionally, the same as we experience a sided length contraction in a gravitational field, then we would not notice a slower speed of light, but somehow outside that field would, and so the speed of light might be much greater if we are in an even greater gravitational field

From a scientific POV, the fact that ADoppler is usually considerably smaller than the associated brightness variation tells me a lot about the properties of traveling light.
Right now, nobody in the whole physics establishment knows anything about it.

use brightness, change in brightness over time, and red-shift to calculate distance and velocity....

acceleration from walking or rockets then, is directional pressure, that has its origin in one side of the object, and gravitational acceleration is a continuous, uniform acceleration throughout the object. Proper acceleration is caused by electric force. And pressure is a proper acceleration from all sides. Proper acceleration acts on a smaller distance. Accelerations are literally “extra space”, the kind that makes light traveling in a straight path spread out over a greater area, and bend at an angle when there is a difference of net acceleration force. Space is contracting near a test particle, and expanding, in it's view, where other masses are located. Or rather the test particle is creating space in its out field, and that space.... expanding to space with lower density by concentration gradient. The proper space is moving “away” from a massive attractor, by coordinates where a test particle is standing still above a surface, or rather.... yes, in effect, when standing still, the proper space is moving up, while if it is falling at the escape velocity at that point, then it is at rest with respect to that proper space. So it is swallowing space... the same space around it, is being compressed, so there is more proper space density. It is as if there is a piece of paper, “proper space”, that is being swallowed up, and scrunched up in a mass, creating “extra space” density closer to it. And it might also explain, if there is more “paper” created, the universe is expanding. It is not only matter is getting swallowed up, but proper space. The effect of acceleration, the swallowing of proper space, on position (by velocity), for a radius r, is proportional to r^2, the amount of surface area compressed by being compressed forward a radius r. The acceleration is square, and so is the compression of surface area. If it was simply a point on paper moving, it would be equal to escape velocity at every point, but velocity adds up, because it is the total of the space compressed. Perhaps there is space inside black holes where matter is free to move. Perhaps dark matter or dark energy creates proper space. Perhaps the time dilation can be explained in terms of proper, consumption of space. As velocity is simply part of the compressed surface area (velocity is the square root of that space, from the beginning to the current time, and as that triangle of space, with the two sides of radius r, and the one side of “a” surface area, is compressed so that its new radii sides are half of r, for example, the same surface area, “a”, and all the area or volume in the former triangle, or cone, is compressed along “r”, so the proper space must remain the same, but compressed into a space with two sides now half their length, for example, giving a square compression factor, and as the radii contract, the surface area at the top of the cone also decreases by a square rate, if it is circular, such that if all the wedges or cones are together inward to the center, they form a sphere, and is more apparent if the wedge is pyramidal, with a rounded base foundation at the top, such with two straight, perhaps curving a little bit, sides, such that their lengths decrease going inward along a radial compression).

Proper space graphics Have two point gravity sources and grid of proper space every so often, continuously, these grid lines split into two and the gravity sources swallow the points or proper space, at a rate equal to, less than, or greater than the splitting show the angles of the lines becoming squished on the gravity sources with time, in 3d grid maybe, and the outward white hole side growing bubbles

Also for swallowing show the downward inward direction increasing with sideways compression to have equally distributed proper volume proper volume space

There is an inherent energy field that permeates all time-space, but is not of time-space Timothy Leary

The spice is necessary to fold space
Travel, without moving
Dune

Maybe translations and forces can be composed and electric forces act within the proper space but the gravity acts ON the proper space

Or there is a proper proper space for electric

So it is like there are squares of electric proper space inside the square of g prop
Different consumption and creation parameters and behaviours for electric and gravitational may give different charges and effects of masses and resulting different forces and accelerations for different particles and masses

Created, whether at particle, or all around

And consumed

With electric, the distance speed covered by two masses with increases mass would be faster, though the speed of a single one ….. no, it wouldn't, and the speed of either one would be slower if it increased its mass. And for gravitational, the speed covered by two masses with increased mass would be faster, but not for an individual mass toward the other if its mass increased.

The space-time interval is then $s = c \cdot (t_2 - t_1) - \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}$ and may be conserved as in the original, or conserved in the form $\frac{s}{t_2 - t_1} = c - \frac{\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}}{t_2 - t_1}$, between transformations of coordinates.

The dark matter is vital to space travel. Travel, without moving (i.e. by creating proper space, or by the chasing of dark matter after ordinary matter). It would actually be accelerating, i.e., constant acceleration, by chasing at a fixed distance.

Oi = angle of incidence

Or = angle of refraction

sin(Oi) = nmaterial * sin(Or)

ni * sin(Oi) = nr * sin(Or)

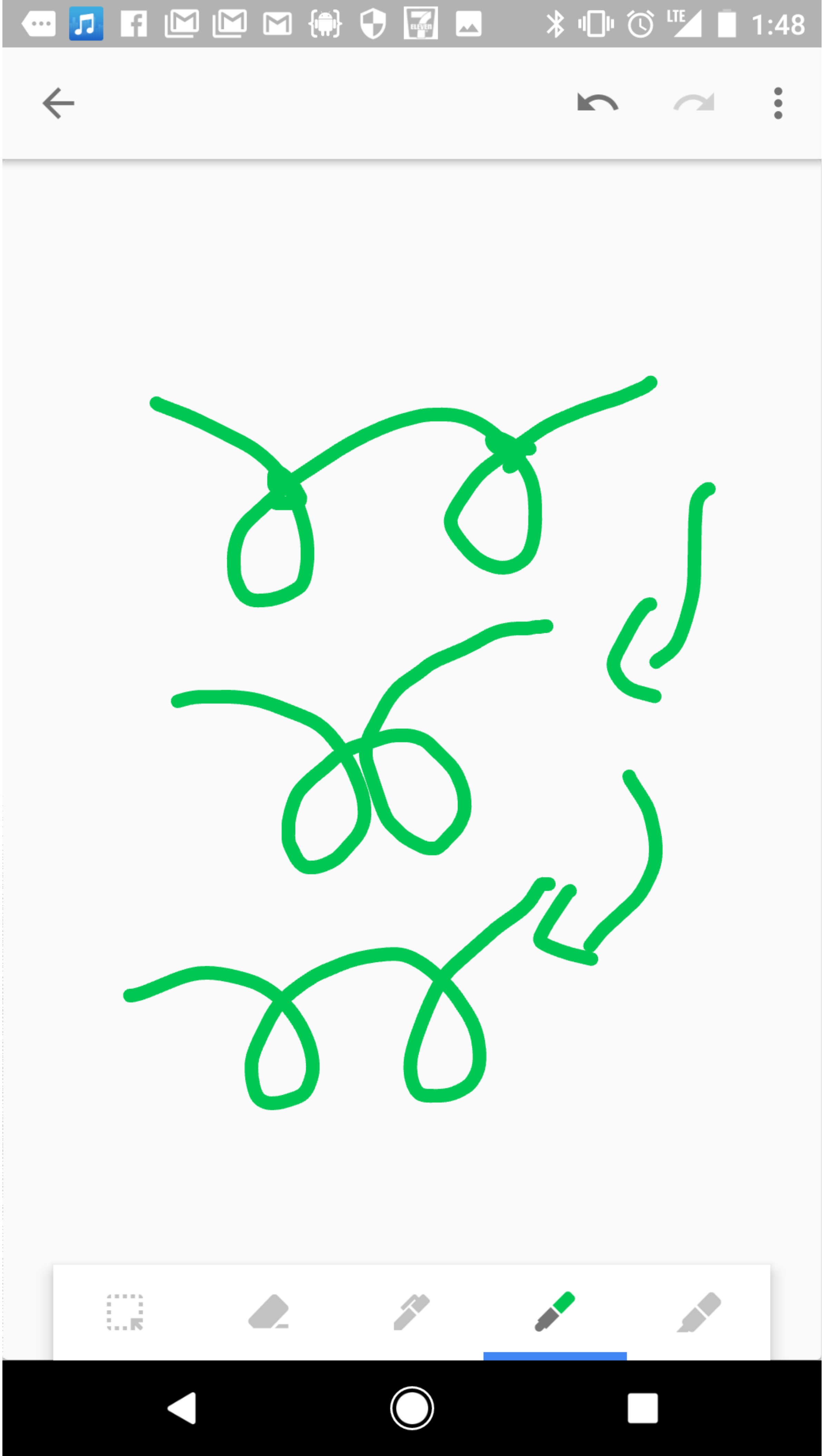
Snell's law

lambda0 / lambda = (c over f) / (v over f) = (f c) / (f v) = c / v = n

lambda = v / f in a medium and lambda 0 = c / f in a vacuum

Two mass bodies coming together and passing though each other

Screenshot_20170520-134818.png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The object or particle is then defined as “rollers” or two boundaries that roll in proper space, and the result of two “rollers” coming into contact is that they might enter each other's rolled-up space, and perhaps come out the other side. Also explains light emerging from r=0 point even though there might be an infinite gravitational force, so light would still travel somewhere, perhaps in the rolled-up space, and its speed would be relative to the proper space.

An object's self-gravity may affect itself, in that an infinite force near r=0, gives infinite dilation, contraction, and thus contracts the object, if it had any size, to a point-size, especially with the “forming” and “swallowing” of proper space. However this cannot be true, as this would also mean that any movement would be affected.

The effect of electric charge on the deflection of light can be calculated by using the density, mass, charge, and refractive index of a material obtained thusly, compared to the density, mass, charge, and refractive index of an ionized plasma.

For a mover at 0.5c for it to appear to move at 0.5c when it really moved 0.25 when contracted, it must also be dilated 0.5 so that in the time it travelled 0.25 only 0.5 time went by for it, when 1 went by for outside

The back would then be contracted 1.5, and ….. forward c would be 2c then... for td and lc to give c and c, $v = lc\ v / td$ $c = lc\ (c - v) / td$ $lc / td = 0.5$ $= 1$

it may not be possible to say if the whole universe is moving left or right at some speed, or not, because it is all relative, however, the light travel time at any point should only depend on the distance and the relative velocities (?) but will give a speed reading of c at every point

If GN-z11 is moving away from us at 11c, we must consider, how does chemistry continue there and how do they receive light from us, and if we are the ones moving away at 11c away from them, then how do receive light from them and function chemically.

Maybe receiver-only theory is to ensure that light arrives at each receiver only as a function of distance, and velocity, and the dilation to ensure that they all measure the speed c

d = vesc^2 / a = (2 G M / D) / (G M / D^2) = D

Because light slows down closer to a gravity source, and is expected to stop at r=0, we may reconsider the equation of work of a gravitationally acceleration body, given the energy $E=\frac{G M m d}{D^2}$ for a distance d that would be traversed by light, in the speed affected by gravity at every point along the way toward M, given the time t it would take to get to the center, or half-way, and the distance d then being the distance that a light unaffected by gravity would travel in the same interval t. Or how much time t it would take for mass m to accelerate to light speed, and given the amount of time t that would take, how much distance light would cover, if affected, and if not affected, by gravity source M.

In addition to the specific potential gravitational space, we can also create a gravitational potential energy space given by $E=M G h$.

For a "radio image" we could transmit , we do not need to direct it anywhere. Just by having antennas at different locations apart a width of a football field or whatever the wavelength is, we can keep sending a continuous "radio image" that should be visible to any observer that focuses correctly on our planet approximately such that the waves travelling straight to them with their wavefronts end up going up corresponding radio telescopes or "cone receivers" spaced a wavelength size apart and provided they are relatively straight head on to the transmitting plane to make out the image, or close if we space it out farther.

This could allow much more meaningful transmission of information, easy to discern as intelligent

For scanning a region for a source of a possible radio image, a telescope with a retractable cylindrical cover is needed that can extend the cover to increase resolution and decrease possible reception angle, and a rotation and scanning algorithm could be used to narrow down on a source using this method. Then, several cylindrical receivers could be used in an array to try to focus on a radio image. The precision would have to be very precise to focus on the exact right size of a planet approximately that could be many light years away. An algorithm could probably be devised to simplify this. Using a jumping between the expected maximum and minimum distance, similar to a narrowing down the number between 1 and 100 in a guessing game, the right distance could be found, or a point could be found where the transition happens, if the cylindrical receivers go through the whole range in one go.

To narrow down on the source point, first the cylindrical cover would be retracted for a very wide angle of reception. Then it would be narrowed a little bit and the base would rotate around to narrow down closer on the source point by passing it around at every point in the circumference that doesn't receive it to going to receiving it, or by making sure it is relatively centered and strongest at that center point. The cover is then further narrowed to focus on a smaller angle and the process is repeated.

The thinnest sheet of metal that would still block out radio waves could be used for the cylindrical cover, to make the receiver lighter and faster to rotate and extend. It would have to be the size of a football field or a stadium, in terms of the cylindrical cover diameter, but it may be easier to build than an actual stadium in principle. The faster and lighter that it can be made, the faster it can be made to rotate and extend, and therefore narrow down and discern radio images. Perhaps a fully solid cylindrical cover is not even needed, but only a mesh like the metal meshes underneath modern radio telescopes.

A conical rather than a cylindrical cover may be needed, with the narrower end up-wards with a hole, to increase the narrowing-down and focus angle, with the extending of the cover, in as short a length of cover as possible. The top's size might be the wrong size for the wavelength, but diffraction through this “slit” might still be possible, with a reduced amplitude.

//////////////////////

c
Φ φ ϕ

(φʹ) or 500 000 (͵φ). The Cyrillic letter Ef (Ф, ф) descends from phi.

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Results

Discussion

Conclusion

Acknowledgements

References

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