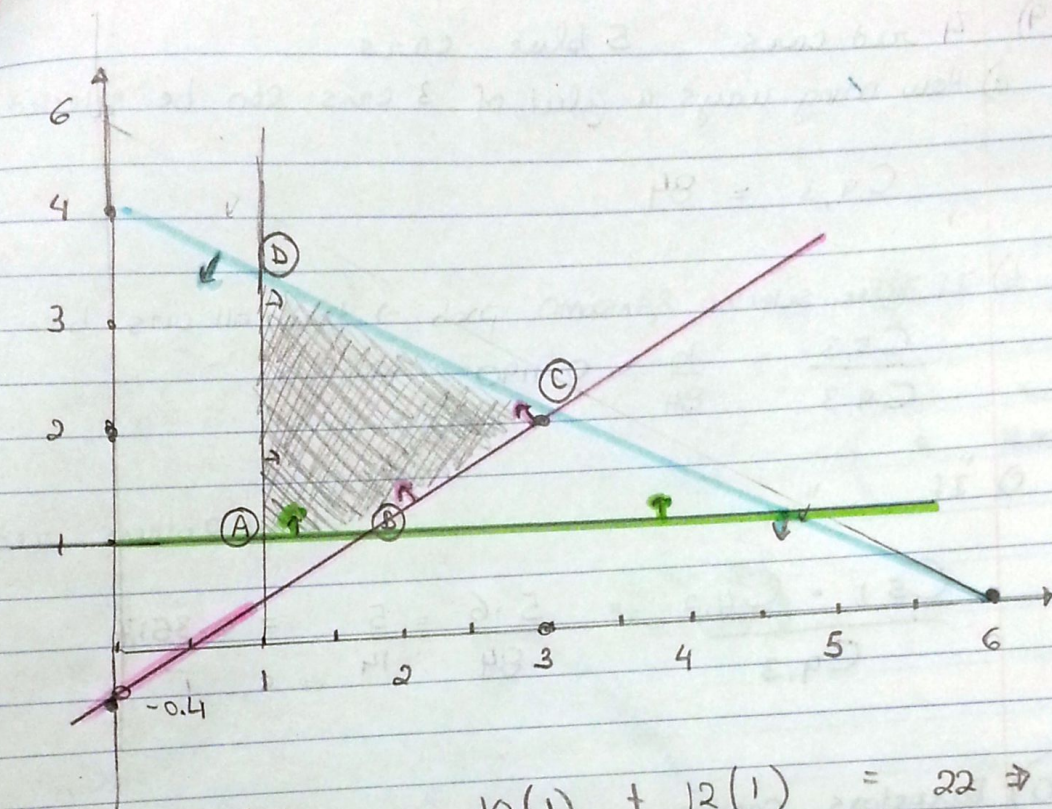


April 2014



A (1, 1)	$10(1) + 12(1)$	$= 22 \Rightarrow \text{MIN}$
B ($7/4, 1$)	$10(7/4) + 12(1)$	$= 29.5$
C (3, 2)	$10(3) + 12(2)$	$= 54 \Rightarrow \text{MAX}$
D ($1, 10/3$)	$10(1) + 12(10/3)$	$= 50$

#8 \$ 130,000 25 years mortgage at 4.25% compounded monthly
 a) Find monthly payment

$$i = \frac{0.0425}{12} = 0.00354 \quad \text{Pv} = \text{PMT} \frac{1 - (1+i)^{-n}}{i} \quad \text{PMT} = \frac{\text{Pv} \cdot i}{1 - (1+i)^{-n}}$$

$$n = 12 \cdot 25 = 300 \quad \text{PMT} = \frac{130,000 \cdot 0.00354}{(1 - (1 + 0.00354)^{-300})} = \frac{704.11}{700.63}$$

b) The unpaid balance after 15 years
 $n = 12 \cdot 15 = 180$
 $\text{FV} = \frac{700.63 (1 + 0.00354)^{180}}{0.00354}$
 unpaid balance after 15 years
 So $25 - 15 = 10$ left
 $130,000 - 104,771.14 = 25,228.86$ \$
 the total interest
 $210,189 - 130,000 = 80,189$ \$