

3850-102 SAMPLE PAPER – SET 8

Certificate in Mathematics – Stage 2

Written

You should have the following for this examination

- a multiple-choice answer sheet
- a pen with black or blue ink
- a ruler
- the use of a calculator is **not** permitted

This question paper is the property of the City and Guilds of London Institute and is to be returned after the examination.

Read the following notes before you answer any questions

- You **must** use a pen with black or blue ink to complete **all** parts of the answer sheet.
- Check that you have the correct answer sheet for the examination.
- Check that your name and candidate details are printed correctly at the top of your answer sheet.
- Inform the invigilator if your name or examination details are not correct.
- Each question shows **four** possible answers (lettered 'a', 'b', 'c' and 'd'); only **one** is correct.
- Decide which **one** is correct and mark your answer on the **answer sheet** with your pen.

For example if you decide 'a' is correct, mark your answer like this

101	<input checked="" type="radio"/>	(b)	(c)	(d)
Cancel	Cancel	Cancel	Cancel	

If you want to change your answer, cancel your first choice by filling in the 'cancel' box below the circle like this

101	<input checked="" type="radio"/>	(b)	(c)	(d)
Cancel	Cancel	Cancel	Cancel	

Then mark the answer which you have now decided is correct. For example if you now decide 'c' is correct, mark your answer like this

101	<input checked="" type="radio"/>	(b)	<input checked="" type="radio"/>	(d)
Cancel	Cancel	Cancel	Cancel	

Any other marks on the form may invalidate some of your answers.

- Any calculations or rough working can be done on the question paper.
- Attempt all questions. If you find a question difficult, leave it and return to it later.

This paper contains 60 questions. Answer them using the 'boxes' numbered 1 to 60 on the answer sheet.

Space for rough work

- 1 A report says one million, one hundred and ten thousand Jamaicans have a cell phone subscription.

What is this number in figures?

- a 111 000
- b 1 110 000
- c 1 110 000 000
- d 1 000 110 000

- 2 What is 700 904 in words?

- a seven hundred nine hundred and four
- b seven thousand nine hundred and four
- c seventy thousand nine hundred and four
- d seven hundred thousand nine hundred and four

- 3 In which one of these numbers does 6 have a value of six tenths?

- a 3.649
- b 95.36
- c 856.07
- d 964.23

- 4 How many pints are there in 4 gallons of milk?
(8 pints = 1 gallon)

- a 2 pints
- b 12 pints
- c 16 pints
- d 32 pints

- 5 A bookcase is 500 mm wide.

How many of these bookcases will fill a space 2 m wide?

- a 4
- b 25
- c 40
- d 250

- 6 A woman puts three items in a box to post to her son.

The items weigh
1.5 kg, 600 g and 450 g.

What is the total weight of the three items?

- a 2.505 kg
- b 2.55 kg
- c 12.0 kg
- d 1065 kg

- 7 Which of the following metric measurements is the nearest to 3 lb?
(2 lb is slightly less than 1 kg)
- a 6 kg
 - b 5 kg
 - c 1.5 kg
 - d 1 kg
- 8 A painter says a job will take
35 minutes preparation time,
70 minutes painting time and
10 minutes to clear up.
What is the total time in hours and minutes for the job?
- a 2 hour 5 minutes
 - b 1 hour 55 minutes
 - c 1 hour 15 minutes
 - d 1 hour 9 minutes
- 9 The temperature in June in Jamaica is usually close to
- a 30°C
 - b 50°C
 - c 85°C
 - d 100°C
- 10 What is $32207 - 4063$?
- a 28 130
 - b 28 144
 - c 28 244
 - d 32 264
- 11 Add 617059 and 1066
- a 618015
 - b 618125
 - c 618215
 - d 723659
- 12 A company spends \$2570 each month on energy.
What is the total for 12 months?
- a \$7710
 - b \$30740
 - c \$30840
 - d \$33810

- 13 What is 2678 divided by 103?
- a 20
 - b 26
 - c 27
 - d 62
- 14 A box contains 40 packets of chips.
A shop wants to buy 1000 packets of chips.
- How many boxes does the shop need?
- a 4
 - b 12
 - c 22
 - d 25
- 15 What is 2709×65 ?
- a 29799
 - b 133045
 - c 176085
 - d 176735
- 16 A woman saves \$250 a month for 12 months
and her husband saves \$300 a month for 12 months.
- How much do they save in 12 months?
- a \$6100
 - b \$6500
 - c \$6600
 - d \$6744
- 17 A meal costs \$186 for a group of people.
They add a \$24 tip to this amount.
Six people divide the total cost equally.
- How much should each person pay?
- a \$27
 - b \$30
 - c \$32
 - d \$35
- 18 What is $\$100 - \36.25 ?
- a \$63.75
 - b \$64.25
 - c \$64.75
 - d \$76.25

19 What is 27.17×23 ?

- a 135.85
- b 503.71
- c 624.91
- d 869.44

20 What is 936.60 divided by 12?

- a 78.05
- b 78.50
- c 78.60
- d 83.50

21 The cost for 20 fruit drinks is \$10.80

What is the cost per drink?

- a \$0.45
- b \$0.54
- c \$0.58
- d \$0.90

22 Solve $76.3 \times 100 \div 10 =$

- a 0.763
- b 7.63
- c 763
- d 7630

23 A bag of cornmeal costs \$3.36
A customer buys two bags of cornmeal.

She pays with a \$20 bill.
How much change should she receive?

- a \$13.28
- b \$13.38
- c \$14.28
- d \$14.72

24 What is $\frac{1}{4}$ of 1800?

- a 225
- b 400
- c 450
- d 720

25

$\frac{1}{3}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{4}{6}$
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Which of these fractions have the same value?

a $\frac{1}{3}$ and $\frac{3}{6}$

b $\frac{1}{3}$ and $\frac{4}{6}$

c $\frac{4}{8}$ and $\frac{4}{6}$

d $\frac{3}{6}$ and $\frac{4}{8}$

26 A shop assistant weighs three bags of fruit.

They weigh

$1\frac{1}{4}$ kg $\frac{1}{2}$ kg $\frac{3}{4}$ kg

What is the total weight of the bags of fruit?

a $1\frac{5}{10}$ kg

b $2\frac{1}{2}$ kg

c $2\frac{3}{4}$ kg

d 3 kg

27 What is $\frac{7}{10} - \frac{3}{5}$

a $\frac{1}{10}$

b $\frac{4}{10}$

c $\frac{5}{10}$

d $\frac{4}{5}$

28 What is the value of $\frac{3}{8} - \frac{1}{4} + \frac{1}{2}$

a $\frac{1}{2}$

b $\frac{3}{8}$

c $\frac{5}{8}$

d $\frac{3}{4}$

- 29 There are 20 people in a team.
Twelve are male.

What percentage of the team are male?

- a 0.6%
- b 8%
- c 12%
- d 60%

- 30 There are 50 questions in a test.
A pupil gives the correct answer to 40 questions.

What percentage of the questions does she answer correctly?

- a 10%
- b 40%
- c 80%
- d 90%

- 31 A shop offers a discount of 5% for one day.
An item has an original price tag of \$60

How much will the discount be?

- a \$3
- b \$5
- c \$12
- d \$30

- 32 What is 25% of 500?

- a 20
- b 25
- c 125
- d 475

- 33 Which of the following has the highest value?

40%	$\frac{1}{4}$	0.33	1 out of 5
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- a 40%
- b $\frac{1}{4}$
- c 0.33
- d 1 out of 5

- 34 What is $\frac{2}{5}$ as a decimal fraction?

- a 0.04
- b 0.1
- c 0.25
- d 0.4

- 35 What is $\frac{30}{100}$ as a decimal fraction?

- a 0.03
- b 0.3
- c 3.0
- d 30.0

- 36 A car has travelled 26 785 km.

Round this number to the nearest hundred.

- a 26 000
- b 26 700
- c 26 800
- d 27 000

37 A saver has \$2543.25 in the bank.

Round this amount to the nearest \$10

- a \$2540
- b \$2543
- c \$2544
- d \$2550

38 17.329 written correct to two decimal places is

- a 17.00
- b 17.30
- c 17.32
- d 17.33

39 97.636 written correct to one decimal place is

- a 97.6
- b 97.63
- c 97.64
- d 97.7

40 A map has a scale of 10 cm represents 20 km.
The distance between two places is 5 cm.

What is the actual distance between the two places?

- a 2.5 km
- b 10 km
- c 40 km
- d 50 km

41 A man wants to draw a wall on a plan.
The wall is 5 m long.
The scale on the plan is 1:50

What is the length of the wall on the plan?

- a 5 cm
- b 10 cm
- c 50 cm
- d 250 cm

42 A cook uses 3 eggs to make 15 cupcakes.

How many eggs would she use to make 45 cupcakes?

- a 3
- b 5
- c 6
- d 9

- 43 A shop owner records the number of customers each day for five days

40 40 67 33 70

What was the average (mean) number of customers a day?

- a 33
- b 40
- c 50
- d 67

- 44 A student records the number of hours sleep he has each night for a week.

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of hours sleep	8	7	8	6	8	7	5

What is the average (mean) number of hours?

- a 5
- b 6
- c 7
- d 8

- 45 The table shows the number of marks a group of students obtained in a test.

Number of marks	9	6	8	7	9	7	10	7	7	7
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What is the range of these marks?

- a 2
- b 4
- c 7
- d 10

- 46 The total cost of an item (C) is

$$C = P + D$$

Where P is the price and D is the delivery charge.

What is the total cost when the price is \$96 and the delivery charge is \$4?

- a \$24
- b \$92
- c \$100
- d \$384

47 $4n - 2 = 18$

What is the value of n ?

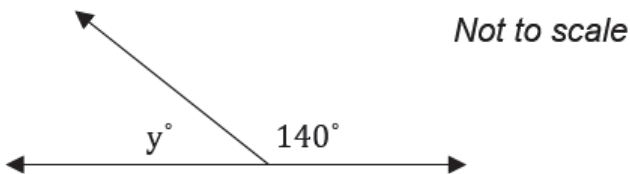
- a 4
- b 5
- c 7
- d 9

48 $2x + 10 = 16$

What is the value of x

- a 2
- b 3
- c 11
- d 13

49



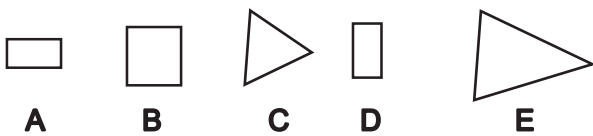
What is the size of the angle y ?

- a 40°
- b 45°
- c 60°
- d 220°

50 Which one of these statements is **NOT** true?

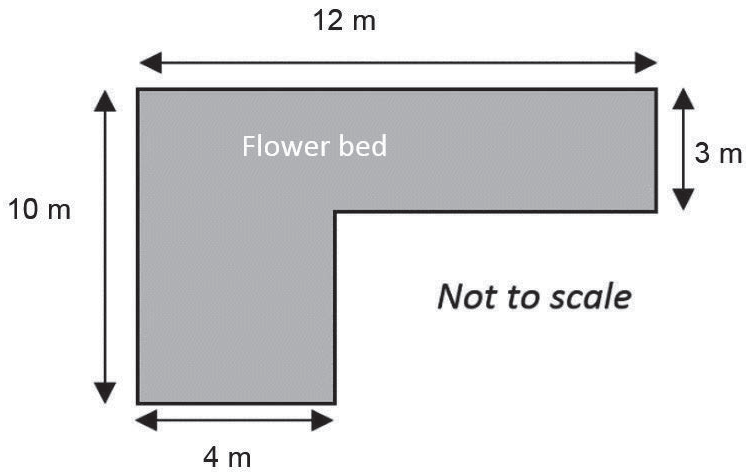
- a An equilateral triangle always has three equal angles
- b An isosceles triangle always has two equal angles
- c An isosceles triangle is always an equilateral triangle
- d An equilateral triangle has three equal sides

51



Which of these shapes are congruent?

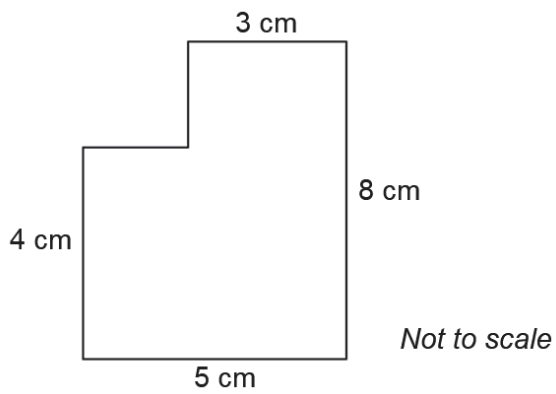
- a All of these
- b A and B
- c C and E
- d A and D



Calculate the perimeter of this flower bed.

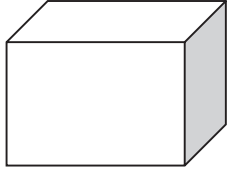
- a 22 m
- b 29 m
- c 36 m
- d 44 m

53



Calculate the area of this shape.

- a 20 cm^2
- b 32 cm^2
- c 40 cm^2
- d 44 cm^2



This block is 8 cm long, 4 cm wide and 4 cm high.

Calculate its volume.

- a 16 cm³
- b 24 cm³
- c 128 cm³
- d 192 cm³

55 Here are the ages of 40 job applicants

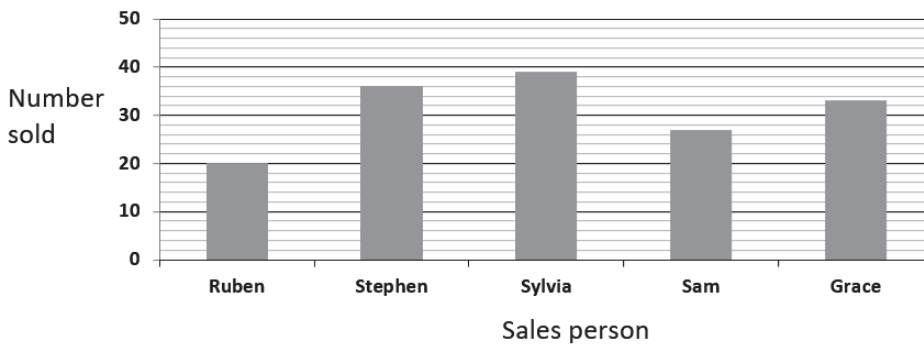
19 32 47 35 22 27 44 45 33 28
 26 34 26 40 37 28 50 35 39 46
 49 27 36 27 39 25 30 23 25 45
 29 22 32 40 20 25 34 38 28 45

Students were asked to construct a frequency table using intervals of 5 years.

What is the frequency for the interval 31 – 35?

- a 5
- b 6
- c 7
- d 8

56 This bar chart is incomplete.



What is missing from the chart?

- a the label on the horizontal axis
- b the scale on the horizontal axis
- c the scale on the vertical axis
- d the title

57 The chart shows the number of students who chose to play different sports.

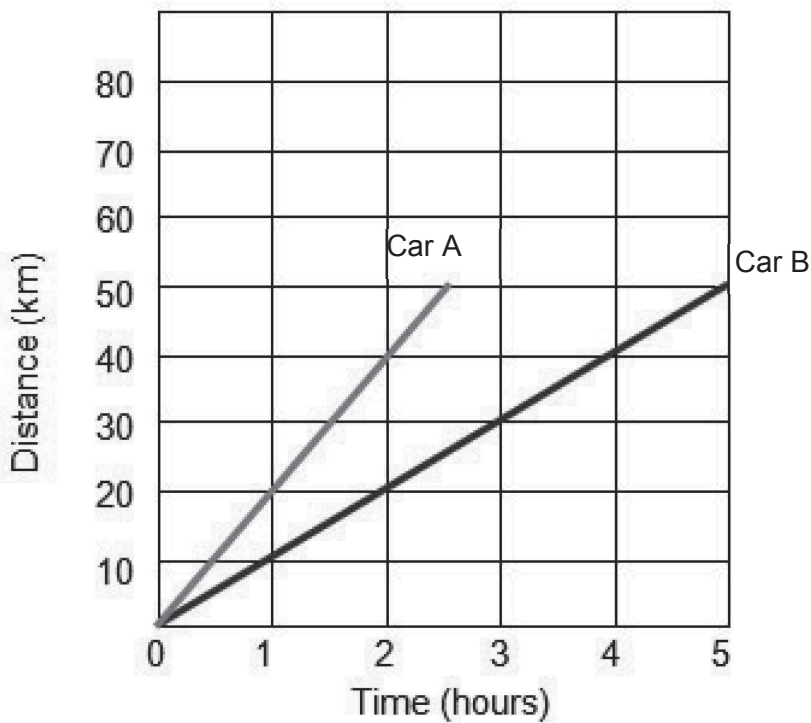
Sport	Number of students
Cricket	☺ ☺ ☺ ☺ ☹
Football	☺ ☺ ☺ ☺ ☺
Golf	☺ ☺ ☹
Netball	☺ ☺ ☺ ☹

KEY ☺ represents 10 students

How many **more** students chose football than netball?

- a 1½
- b 10
- c 15
- d 20

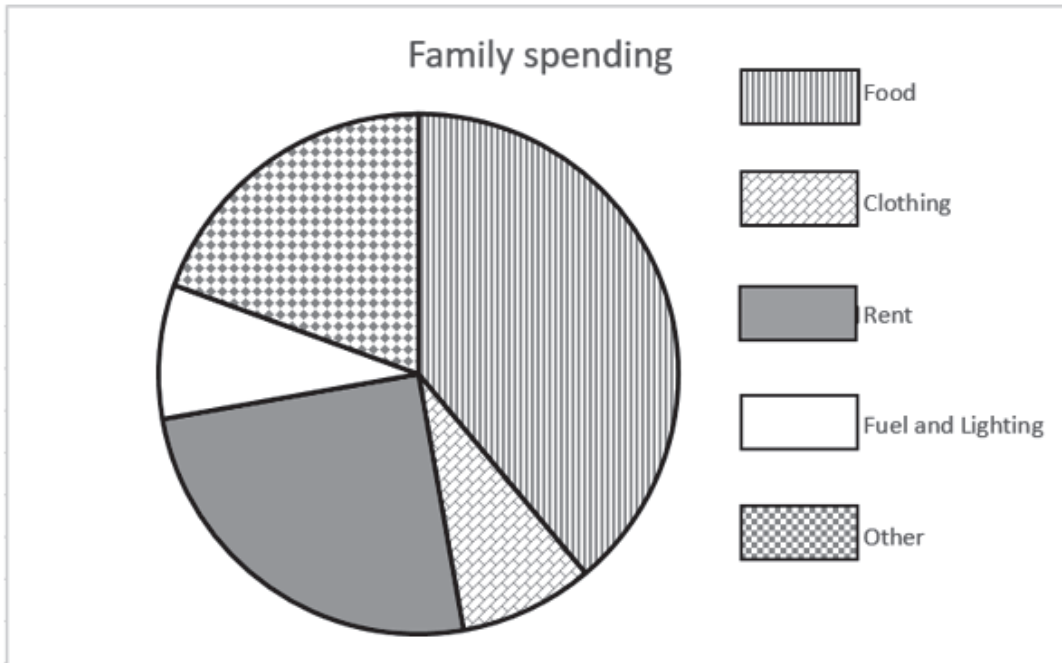
58 The graph shows two car journeys.



Which statement is true?

- a Car A is slower than Car B
- b Car B is travelling at 50 km/h
- c Car A and Car B travelled for the same time
- d Car A and Car B travelled the same distance

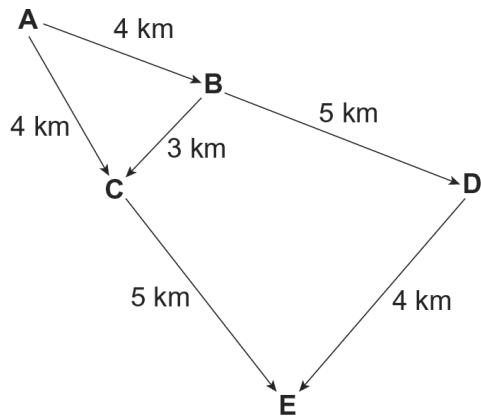
59 This pie chart shows a family's spending.



Which statement is true?

- a The family spend more on rent than on food
- b The family spend over half their money on food
- c The family spend more on clothing than on rent
- d The family spend about a quarter of their money on rent

60



A driver wants to travel from B to E.

How many kilometres is the shortest route?

- a 5 km
- b 8 km
- c 9 km
- d 13 km

NOW GO BACK AND CHECK YOUR WORK

- IMPORTANT

Are the details at the top of the answer sheet correct?

Have you filled in your answers in INK in the appropriate boxes on the answer sheet?