Name ..... Class .....

Calculator Crossover Paper 5

GCSE Mathematics · Foundation and Higher

40 marks · 45 minutes · Calculator

1 (a) Use your calculator to work out $\frac{4.8^2 - \sqrt{27.5}}{2.36 + 1.9}$

Write down all the figures on your calculator display.

..... **(2)**

(b) Give your answer to part (a) correct to 3 significant figures.

..... **(1)**

[Question 1: 3 marks]

2 (a) The length of a plank of wood is 2.4 metres, correct to 1 decimal place.

Complete the error interval for the length, L metres, of the plank.

..... $\leq L <$ .....

(2)

(b) Sam uses his calculator to work out the value of a number y.

He writes down the first 2 digits of his answer on his calculator display.

He writes $y = 7.6$

Complete the error interval for y.

..... $\leq y <$ .....

(2)

[Question 2: 4 marks]

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3 Hollie's annual salary increases from £23 400 to £24 921

Work out the percentage increase in Hollie's salary.

..... % **(2)**

[Question 3: 2 marks]

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4 A garden sprinkler uses 85 litres of water every 4 minutes.

1 m^3 = 1000 litres

Work out how many cubic metres (m^3) of water the sprinkler uses in 1 hour.

..... m^3 **(3)**

[Question 4: 3 marks]

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5 Mia rolls a six-sided dice 250 times.

The dice lands on 6 a total of 85 times.

(a) Work out the relative frequency of the dice landing on 6

..... **(1)**

(b) Mia is going to roll the same dice 600 times.

Work out an estimate for the number of times the dice will land on 6

..... **(1)**

(c) Mia says, "I think the dice is biased."

Is Mia correct?

Give a reason for your answer.

.....

..... **(1)**

[Question 5: 3 marks]

6 The table shows information about the number of goals scored in each match by a hockey team last season.

Number of goals	Frequency
0	7
1	11
2	9
3	8
4	4

(a) Work out the mean number of goals scored per match.

Give your answer correct to 2 decimal places.

..... **(3)**

(b) Find the median number of goals scored per match.

..... **(1)**

[Question 6: 4 marks]

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7 Make v the subject of the formula $s = \frac{(u + v)t}{2}$

$v =$ ..... **(2)**

[Question 7: 2 marks]

8 There are 4200 fish in a lake.

The number of fish is expected to increase by 12% each year.

Work out an estimate for the number of fish in the lake after 3 years.

Give your answer correct to the nearest whole number.

..... **(3)**

[Question 8: 3 marks]

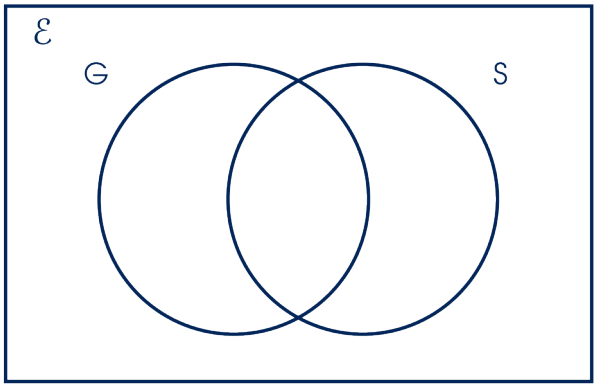
9 There are 60 members in a sports club.

34 members use the gym (G).

25 members use the swimming pool (S).

9 members use neither the gym nor the swimming pool.

(a) Use this information to complete the Venn diagram.



(2)

(b) One of the 60 members is chosen at random.

Work out the probability that this member uses exactly one of the gym or the swimming pool.

..... **(2)**

[Question 9: 4 marks]

10 The diagram shows a prism.

The cross section of the prism is a trapezium.

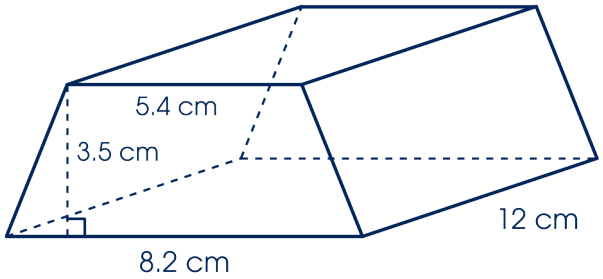


Diagram NOT accurately drawn

Work out the volume of the prism.

..... cm^3 **(3)**

[Question 10: 3 marks]

11 *ABCD* is a rectangular field.

AB = 84 m and *BC* = 52 m.

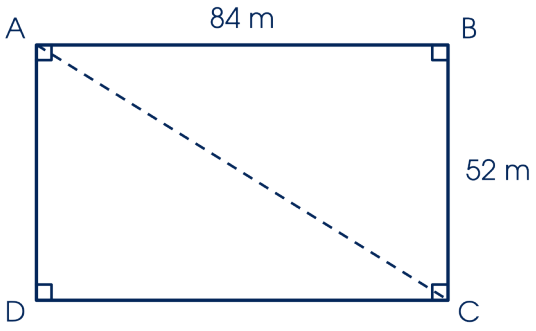


Diagram NOT accurately drawn

Zoe walks from *A* to *C* along the diagonal of the field.

Tom walks from *A* to *B* and then from *B* to *C*.

How much further does Tom walk than Zoe?

Give your answer correct to 1 decimal place.

..... m **(3)**

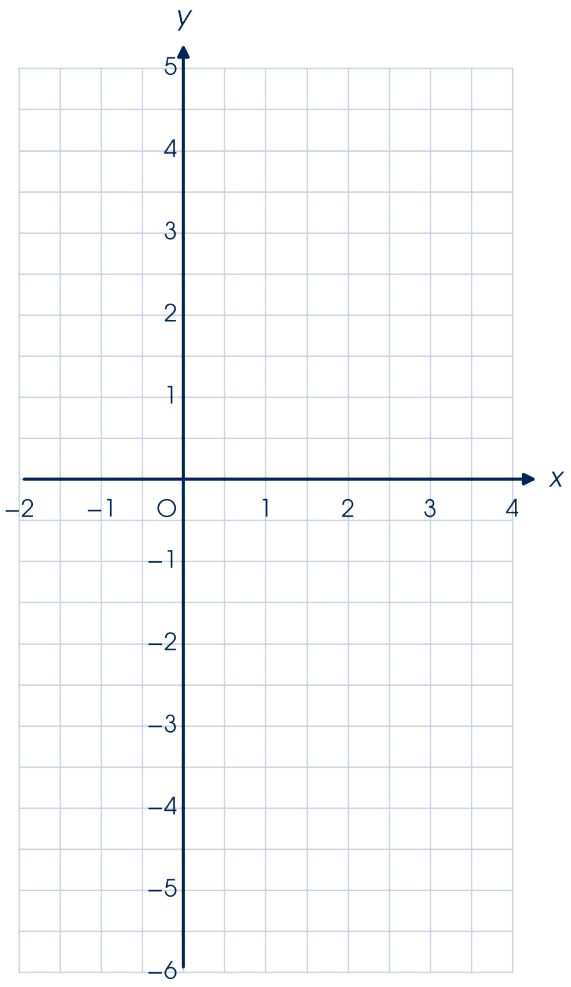
[Question 11: 3 marks]

12 (a) Complete the table of values for $y = x^2 - 2x - 4$

x	−2	−1	0	1	2	3	4
y	4		−4		−4		4

(2)

(b) On the grid, draw the graph of $y = x^2 - 2x - 4$ for values of x from −2 to 4



(2)

(c) Use your graph to estimate the solutions of $x^2 - 2x - 4 = 0$

..... **(2)**

[Question 12: 6 marks]

TOTAL FOR PAPER IS 40 MARKS