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17 Alexa has five cards.
Each card has a number on it.

The table gives information about the numbers on the five cards.

Total	Median	Mode	Range
45	8	5	10

Using the information in the table, complete each card by writing its number on it.

(Total for Question 17 is 3 marks)

18 The length of a book is 33.8 cm, correct to one decimal place.

(a) Write down the lower bound of the length of the book.

..... cm
(1)

(b) Write down the upper bound of the length of the book.

..... cm
(1)

(Total for Question 18 is 2 marks)



19 Nav has worked out $\frac{68.3 \times 42.8}{0.021}$ on his calculator.

His answer is 139201.9048

Without using a calculator and using suitable approximations, check that his answer is sensible.
Show your working clearly.

(Total for Question 19 is 2 marks)

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20 Markus makes a steel framework.

The framework is in the shape of the right-angled triangle ABC shown in the diagram.

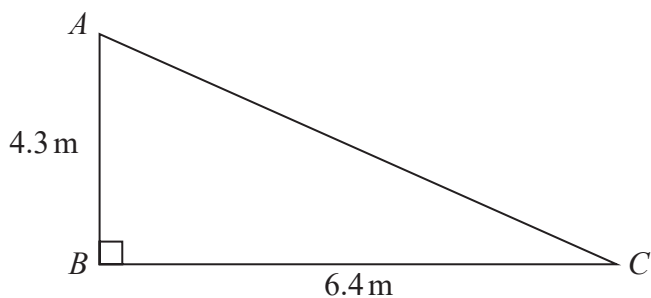


Diagram **NOT** accurately drawn

The steel that Markus uses costs \$22 per metre.

The steel can **only** be bought in a length that is a whole number of metres.

Work out the total cost of the steel that Markus buys in order to make the framework.

\$.....

(Total for Question 20 is 4 marks)



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21 Alison buys 2 boxes of strawberries, box **A** and box **B**.

Box **A** contains 15 strawberries.

The strawberries in box **A** have a mean weight of 24 grams.

Box **B** contains 25 strawberries.

The strawberries in box **B** have a mean weight of 18 grams.

Alison puts all 40 strawberries into a bowl.

Work out the mean weight of the 40 strawberries.

..... grams

(Total for Question 21 is 3 marks)



22 (a) Factorise $x^2 - x - 42$

.....
(2)

(b) Solve the inequality $3x + 15 < 8x + 3$

Show clear algebraic working.

.....
(3)

(Total for Question 22 is 5 marks)

23 Given that $150^x = 1$

(a) write down the value of x .

$x =$
(1)

Given that $3^{-8} \div 3^{-6} = 3^n$

(b) find the value of n .

$n =$
(1)

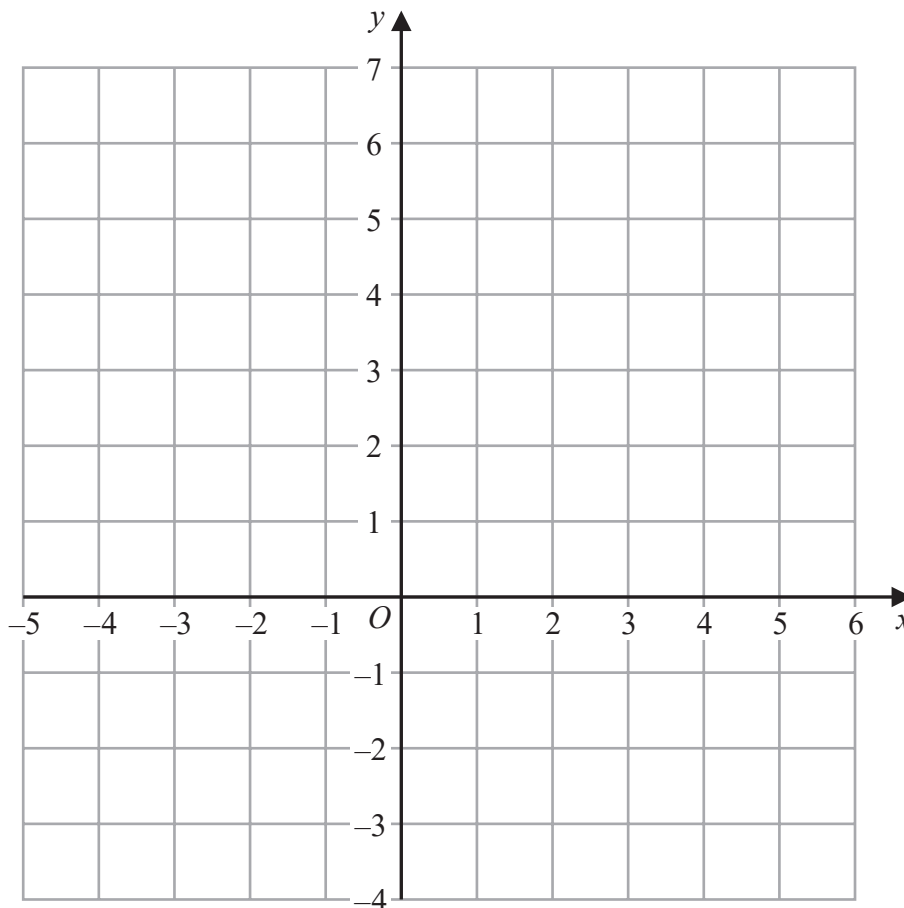
(Total for Question 23 is 2 marks)



24 Show, by shading on the grid, the region that satisfies all three of the inequalities

$$x \leq 4 \quad \text{and} \quad y \geq -2 \quad \text{and} \quad y \leq x$$

Label the region **R**.



(Total for Question 24 is 3 marks)

25 Find the gradient of the straight line with equation $5x + 2y = 7$

(Total for Question 25 is 2 marks)



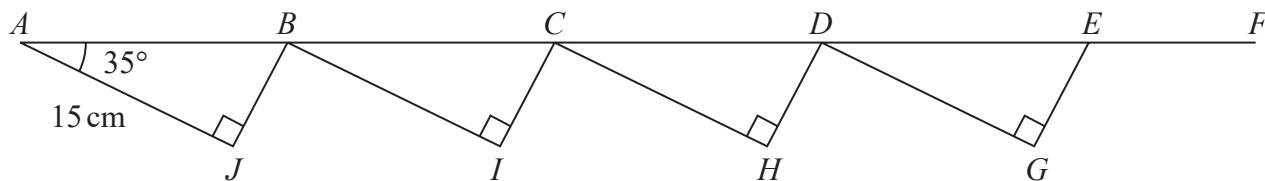
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- 26 The diagram shows four congruent right-angled triangles ABJ , BCI , CDH and DEG .
The diagram also shows the straight line $ABCDEF$.

Diagram NOT accurately drawn



$AJ = 15 \text{ cm}$
Angle $BAJ = 35^\circ$

$AF = 80 \text{ cm}$

Work out the length of EF .
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 26 is 5 marks)

TOTAL FOR PAPER IS 100 MARKS

