CALC B

GCSE Mathematics · Foundation Tier

40 marks · 45 minutes · Calculator

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

Answer all questions. Show all your working. Calculators may be used. Diagrams are NOT accurately drawn.

1 Write these numbers in order of size. Start with the smallest number.

0.6 **0.06** **0.66** **0.606**

.....

(Total for Question 1 is 1 mark)

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2 **(a)** Work out $3.7^2 - \sqrt{5.29}$

.....

(1)

(b) Work out $\frac{18.4 \times 2.7}{6.1 - 1.6}$ Write down all the figures on your calculator display.

.....

(1)

(Total for Question 2 is 2 marks)

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3 Write 252 as a product of its prime factors.

.....

(Total for Question 3 is 2 marks)

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4 Work out the area of the trapezium.

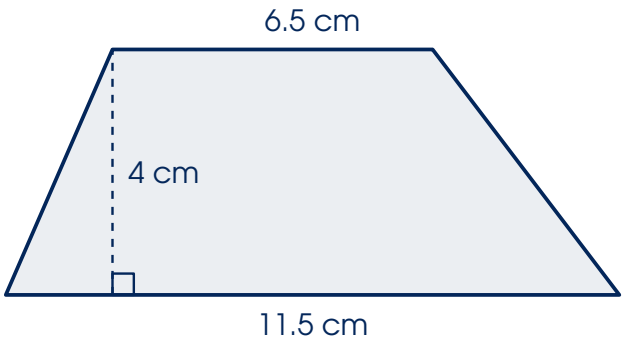


Diagram NOT accurately drawn

..... cm^2

(Total for Question 4 is 2 marks)

5 **v = u + at**

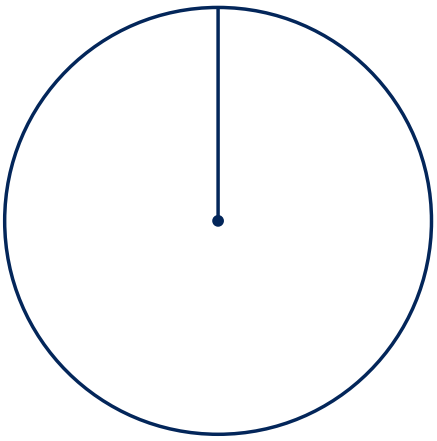
Work out the value of v when $u = 4$, $a = 9.8$ and $t = 2.5$

$v =$ .....

(Total for Question 5 is 2 marks)

6 72 people were asked to choose their favourite fruit. The table shows the results.

Fruit	Frequency
Apple	20
Banana	26
Orange	16
Grape	10



Draw an accurate pie chart to show this information.

(Total for Question 6 is 3 marks)

7 Kemi bought a car for £14 500. Two years later she sold it for £11 020

A car dealer says, "Most cars lose more than 25% of their value in two years."

Did Kemi's car lose more than 25% of its value? You must show all your working.

(Total for Question 7 is 3 marks)

8 Work out the size of each interior angle of a regular octagon.

.....°

(Total for Question 8 is 2 marks)

9 A spinner can land on red, blue, green or yellow.

Colour	Red	Blue	Green	Yellow
Probability	0.35	0.2		

The probability that the spinner lands on yellow is twice the probability that it lands on green.

(a) Work out the probability that the spinner does not land on red.

.....

(1)

(b) Work out the probability that the spinner lands on yellow.

.....

(2)

(Total for Question 9 is 3 marks)

10 **(a)** Expand and simplify $3(x + 4) + 2(x - 5)$

.....

(2)

(b) Factorise $x^2 + 7x$

.....

(1)

(Total for Question 10 is 3 marks)

11 The length of a pencil is L cm. $L = 14.6$ correct to 1 decimal place.

Complete the error interval for L.

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

(Total for Question 11 is 2 marks)

12 The same pair of trainers is sold in Paris and in London.

In Paris the trainers cost €145. In London the trainers cost £128

The exchange rate is £1 = €1.16

In which city are the trainers cheaper, and by how much? Give your answer in pounds.

(Total for Question 12 is 3 marks)

13 The diagram shows a triangle. All angles are in degrees.

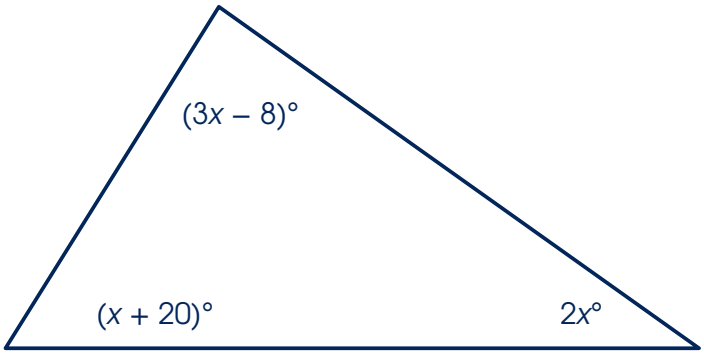


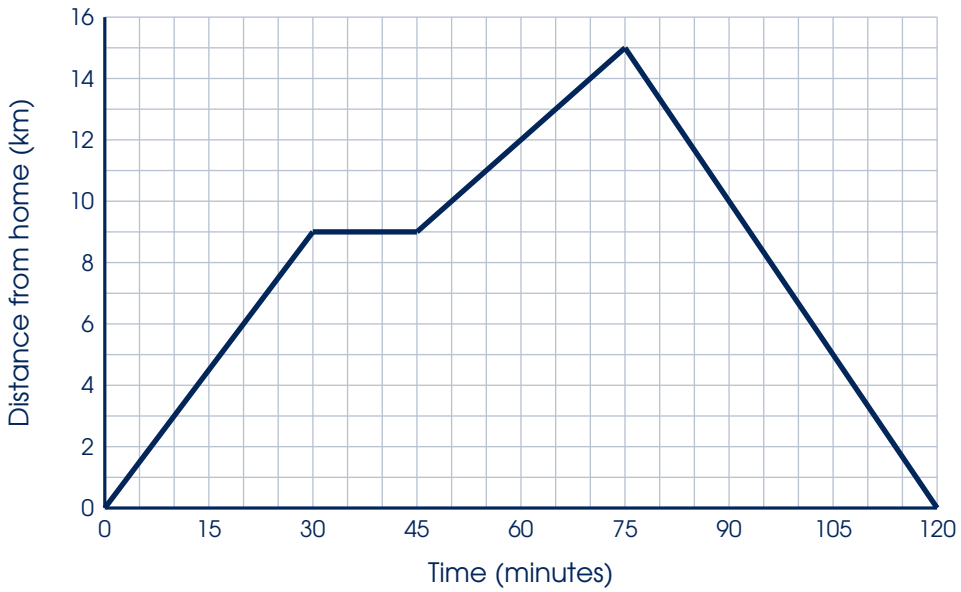
Diagram NOT accurately drawn

Work out the size of the largest angle in the triangle.

..... °

(Total for Question 13 is 3 marks)

14 Ella cycled from her home to a lake and back. The graph shows her journey.



(a) For how many minutes did Ella stop on the way to the lake?

..... minutes

(1)

(b) Work out Ella's average speed for the first 30 minutes, in km/h.

..... km/h

(2)

(c) On which part of the journey did Ella cycle fastest? Give a reason.

.....

(1)

(Total for Question 14 is 4 marks)

15

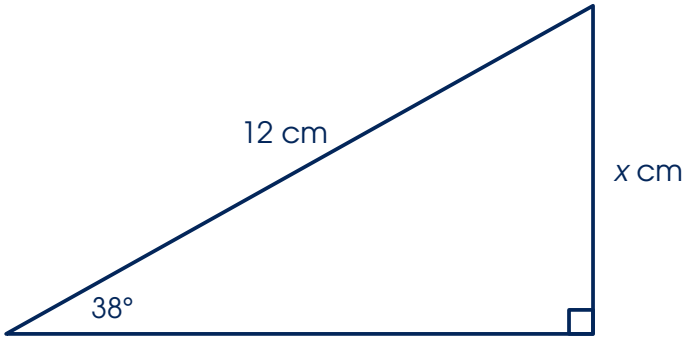


Diagram NOT accurately drawn

Work out the value of x. Give your answer correct to 3 significant figures.

$x =$ .....

(Total for Question 15 is 2 marks)

16 In a sale, all prices are reduced by 20%. The sale price of a coat is £58.40

Mia says, "The original price was £58.40 plus 20% of £58.40, so it was £70.08"

(a) Work out the original price of the coat.

£.....

(2)

(b) Explain Mia's mistake.

.....

.....

(1)

(Total for Question 16 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS