

Answer **all** questions in the spaces provided.

1 $A = -9$ and $B = 12$

Work out the value of $\frac{4(A + 3)}{B}$

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.....
.....
.....

Answer (3 marks)

2 Jack has a box of 100 coloured discs.
The discs are Red, Blue, Green and Yellow.
The table shows some of the probabilities of choosing a colour.

Colour	Red	Blue	Green	Yellow
Probability	0.6	0.1		0.1

2 (a) Jack chooses a disc at random from the box.
Work out the probability that he chooses a Green disc.

.....
.....

Answer (2 marks)

2 (b) Jack says: 'There must be 60 Red discs in the box.'

Is Jack correct?
Tick the correct box.

Yes

No

Give a reason for your answer.

Reason

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.....

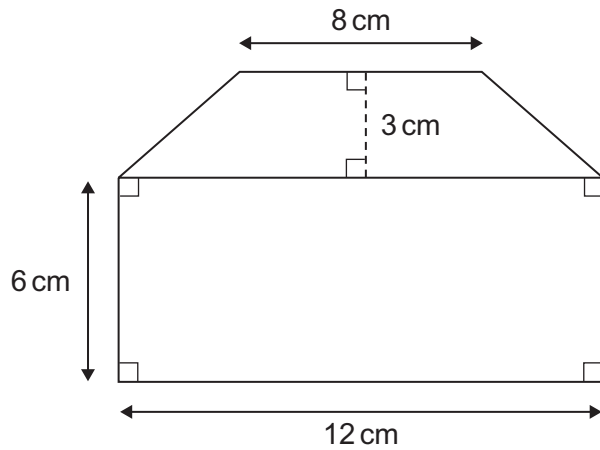
(2 marks)

7

Turn over ►



3 The shape is a drawing of a house.



Not drawn accurately

Work out the area of this shape.
State the units of your answer.

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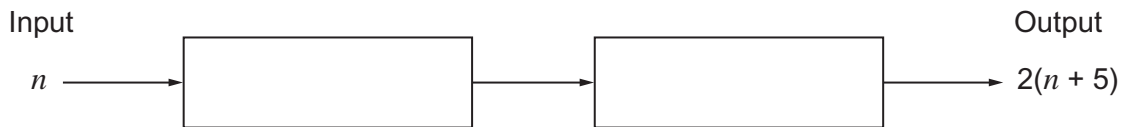
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Answer (4 marks)

4 A flow diagram for a two-stage operation is shown.



4 (a) Fill in the boxes of the flow diagram so that they represent this two-stage operation. (2 marks)

4 (b) When the input is -1, what is the output?

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.....

Answer (1 mark)



5 You are given that $46 \times 137 = 6302$

Write down the answers to these calculations.

5 (a) 46×1.37

.....

Answer (1 mark)

5 (b) $\frac{6302}{460}$

.....

Answer (1 mark)

5 (c) $\frac{63020}{46 \times 137}$

.....

Answer (1 mark)

Turn over for the next question



6 (a) Solve $\frac{28}{w} = 7$

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Answer $w =$ (1 mark)

6 (b) Solve $7x - 2 = 3x + 8$

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Answer $x =$ (3 marks)

6 (c) Solve $\frac{3y + 11}{4} = 2$

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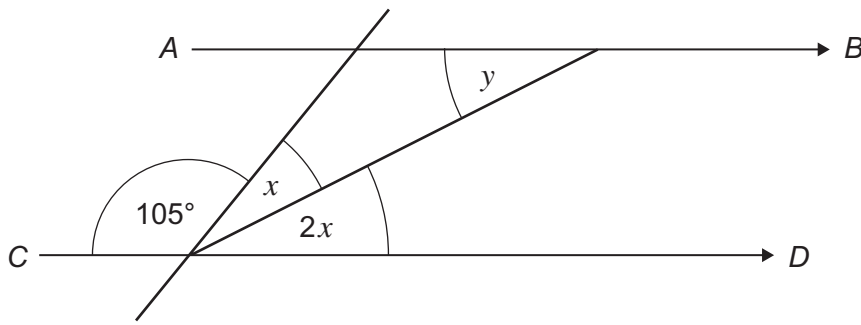
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Answer $y =$ (3 marks)



7 In the diagram AB is parallel to CD .



Not drawn accurately

7 (a) Work out the value of x .

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.....

.....

Answer degrees (2 marks)

7 (b) Work out the value of y .
Give a reason for your answer.

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.....

.....

Answer degrees

Reason

(2 marks)



8 (a) Work out $\frac{5}{6} \div \frac{3}{4}$

Give your answer in its simplest form.

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.....

Answer (3 marks)

8 (b) Work out $4\frac{2}{5} - 1\frac{1}{3}$

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Answer (3 marks)

9 Pam wants to collect information about the total number of hours of homework the students in her class did last week.

Design a suitable question she could use to find out this information.
Remember to include response boxes.

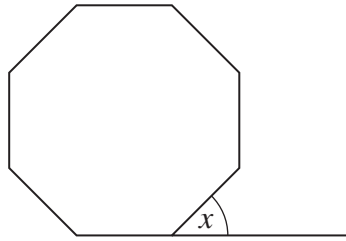
Question
.....
.....

Response

(2 marks)



10 The diagram shows a regular octagon.



Not drawn accurately

10 (a) Explain why the exterior angle of a regular octagon, marked x on the diagram, is 45°

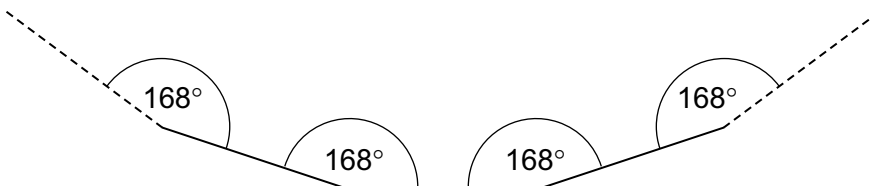
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(1 mark)

10 (b) The diagram shows part of a regular polygon. Each interior angle is 168° .



Not drawn accurately

Calculate the number of sides of this regular polygon.

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Answer (3 marks)



11 A restaurant offers a family discount.
 The Taylor family have a meal at this restaurant.
 Before the discount the meal costs £140
 After the discount the cost is £112

Calculate the percentage discount.

.....

Answer % (3 marks)

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

x	-1	0	1	2	3	4	5
y		2	-1		-1	2	7

.....

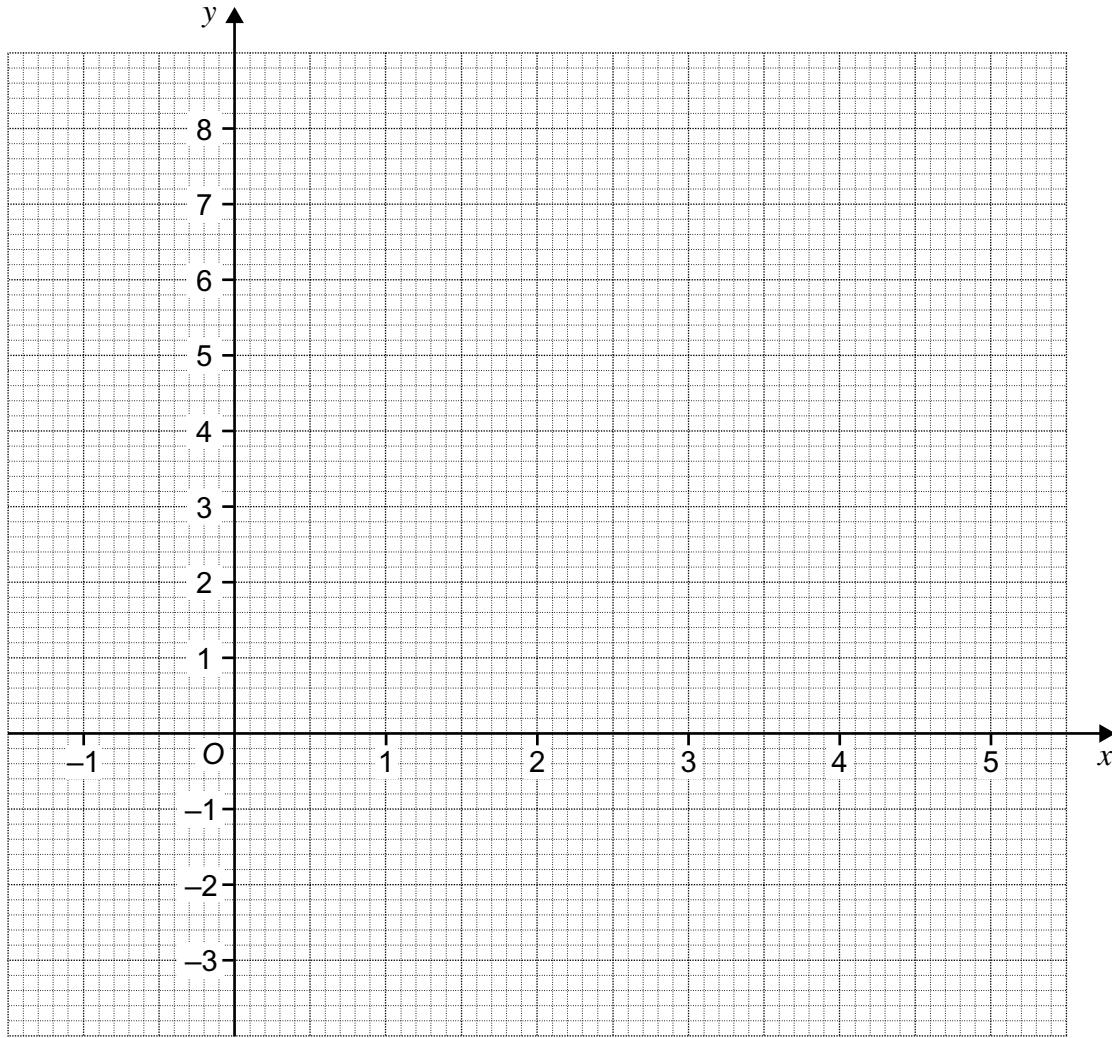
 (2 marks)

12 (b) On the grid opposite, draw the graph of $y = x^2 - 4x + 2$ for values of x from -1 to 5 (2 marks)

12 (c) Use the graph to solve the equation $x^2 - 4x + 2 = 0$

.....
 Answer $x =$ or $x =$ (1 mark)





Turn over for the next question

8

Turn over ►

