

8 (a) Simplify $a \times a \times a \times a$

.....
(1)

(b) Simplify $4b \times 5c$

.....
(1)

(c) Simplify $6d + 2e + d - 5e$

.....
(2)

(Total for Question 8 is 4 marks)

9 Sabbir has some boxes of bananas and some sacks of tomatoes.
The weight of each box of bananas is the same and the weight of each sack of tomatoes is the same.

The weight of 3 boxes of bananas is 42 kg.

The weight of 8 sacks of tomatoes is 68 kg.

Work out the total weight of 9 boxes of bananas and 15 sacks of tomatoes.

..... kg

(Total for Question 9 is 3 marks)



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10 The diagram shows the isosceles triangle ABC in which $AB = AC$

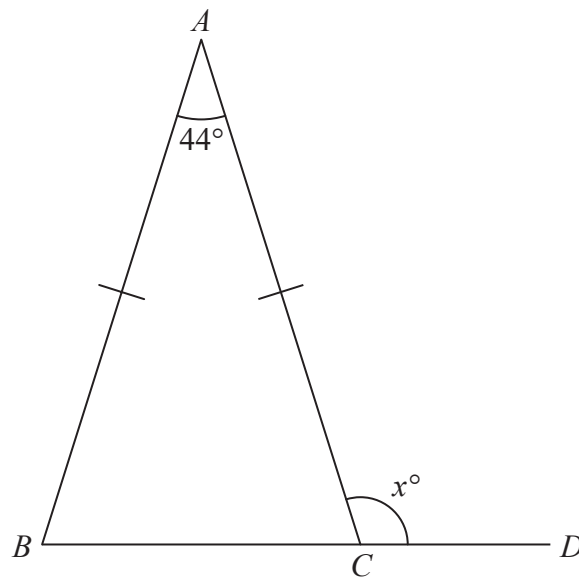


Diagram **NOT** accurately drawn

BCD is a straight line.

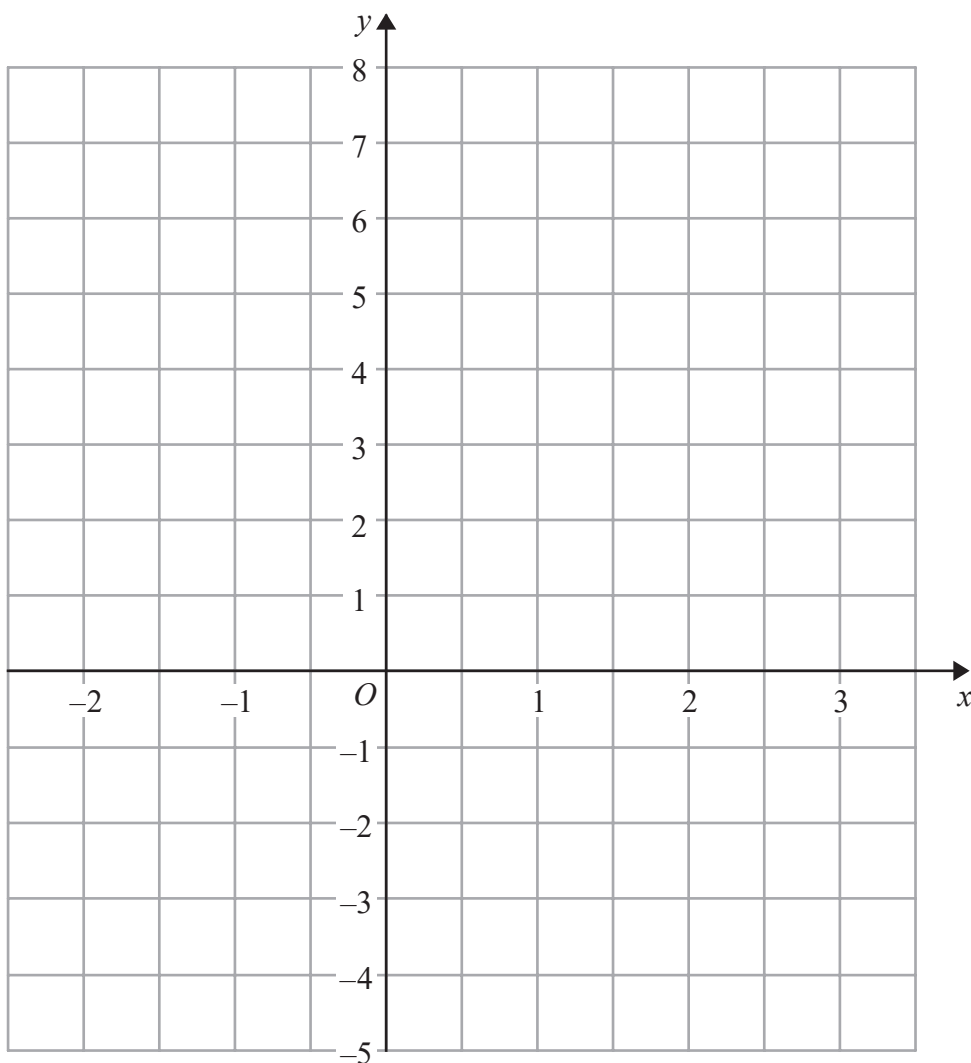
Work out the value of x .

$x =$

(Total for Question 10 is 3 marks)



11 On the grid, draw the graph of $y = 3 - 2x$ for values of x from -2 to 3



(Total for Question 11 is 3 marks)

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12 Rose and Haydn share £250 in the ratio 2:3

Rose gives all her share of the money to charity.
Haydn gives 42% of his share of the money to charity.

Rose gives more money to charity than Haydn gives to charity.

Work out how much more.

£.....

(Total for Question 12 is 5 marks)



P 6 6 2 9 6 A 0 1 3 2 4

13 A circle has diameter 18 cm.

Work out the area of the circle.

Give your answer correct to 3 significant figures.

..... cm²

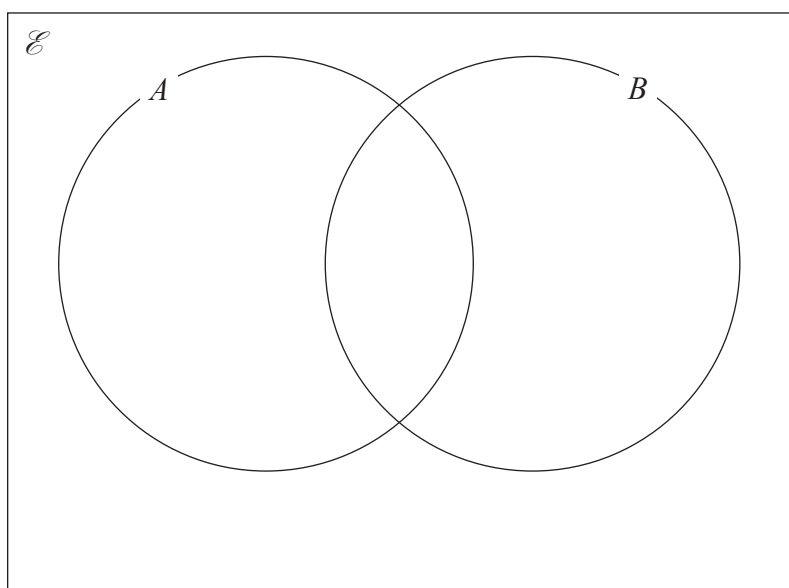
(Total for Question 13 is 2 marks)

14 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$

$A = \{2, 4, 6, 8, 10, 12\}$

$B = \{3, 6, 9, 12\}$

(a) Complete the Venn diagram below for the sets \mathcal{E} , A and B .



(3)

One of the numbers in \mathcal{E} is to be chosen at random.

(b) Find the probability that this number is not in set A **and** not in set B .

.....
(2)

(Total for Question 14 is 5 marks)



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15 (a) Expand $5(3a + 4)$

.....
(1)

(b) Factorise $4c - 14$

.....
(1)

(c) Solve $5x - 11 = x + 6$
Show clear algebraic working.

$x =$
(3)

(Total for Question 15 is 5 marks)



16 Show that $3\frac{1}{5} \times 1\frac{5}{6} = 5\frac{13}{15}$

(Total for Question 16 is 3 marks)

17 Given that $a < b < c$

the four whole numbers a, a, b and c have

- a mode of 7
- a median of 8.5
- a mean of 9

Work out the value of a , the value of b and the value of c .

$a =$

$b =$

$c =$

(Total for Question 17 is 4 marks)

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