

- 9 (a) Write $\frac{39}{150}$ as a percentage.

..... %
(1)

There are 30 dogs staying in some boarding kennels.
12 of the dogs are brown.

- (b) What fraction of the dogs in the boarding kennels are **not** brown?
Give your fraction in its simplest form.

.....
(2)

- (c) Show that $\frac{4}{9} + \frac{1}{6} = \frac{11}{18}$

(2)

(Total for Question 9 is 5 marks)

- 10 A circle has a **diameter** of 14 cm.

Calculate the area of the circle.

Give your answer correct to 3 significant figures.

..... cm²

(Total for Question 10 is 2 marks)



- 11 (a) Use your calculator to work out the value of

$$\frac{7.45}{4.3^2 - 2.9}$$

Give your answer as a decimal.
Write down all the figures on your calculator display.

.....
(2)

- (b) Write your answer to part (a) correct to 3 decimal places.

.....
(1)

(Total for Question 11 is 3 marks)

- 12 Alisa, Jena and Mikael each pick cucumbers.

Alisa picks C cucumbers.
Jena picks 5 fewer cucumbers than Alisa.
Mikael picks twice as many cucumbers as Alisa.

The total number of cucumbers picked by Alisa, Jena and Mikael is T

Find a formula for T in terms of C
Give your formula in its simplest form.

.....
(Total for Question 12 is 3 marks)



13 The diagram shows a classroom wall in the shape of a trapezium.

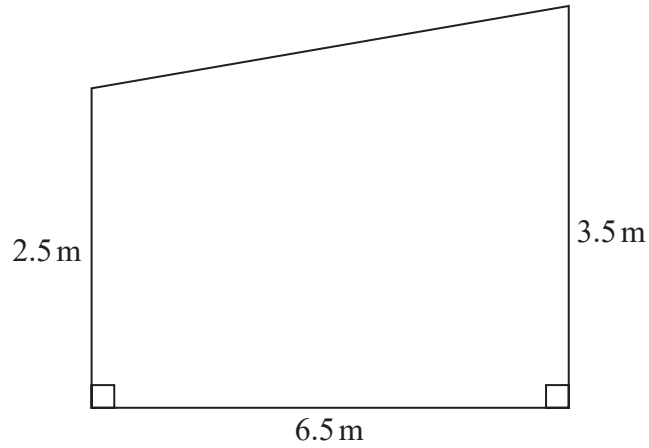


Diagram NOT accurately drawn

Dion wants to paint the classroom wall completely twice.
He knows that each tin of paint will cover 12 m^2

He is going to have to buy all the paint he needs.

Work out the least number of tins of paint that Dion will need to buy.
Show your working clearly.

.....
(Total for Question 13 is 4 marks)

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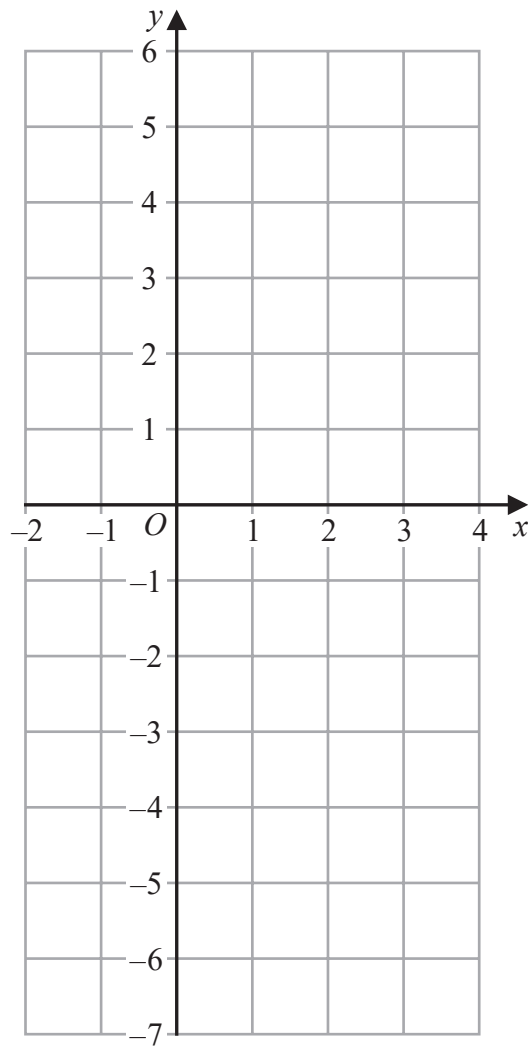


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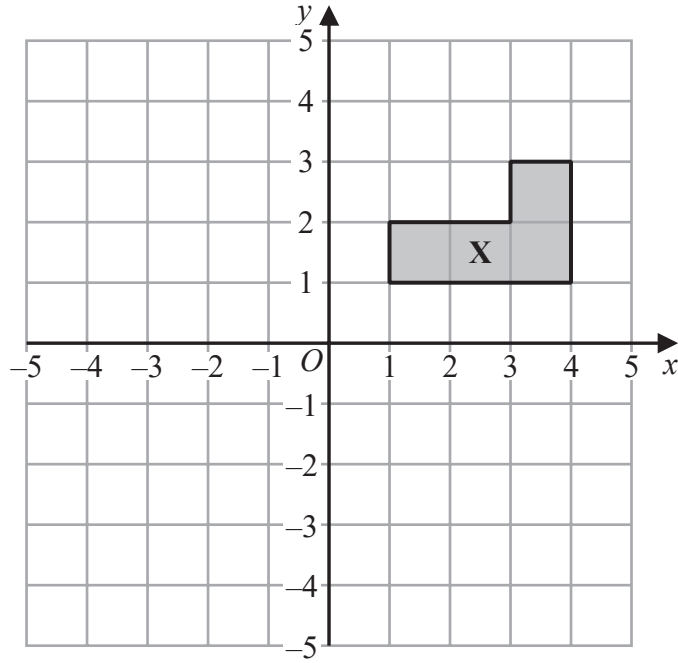
14 On the grid, draw the graph of $y = 2x - 3$ for values of x from -2 to 4



(Total for Question 14 is 3 marks)

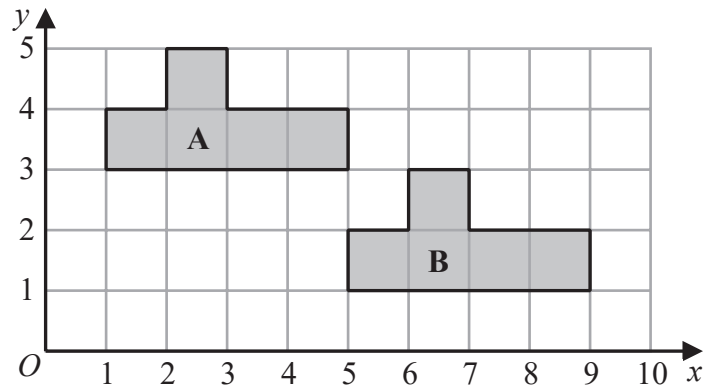


P 6 9 1 9 5 A 0 1 3 2 4



(a) On the grid above, rotate shape X 90° clockwise about O

(2)



(b) Describe fully the single transformation that maps shape A onto shape B

(2)

(Total for Question 15 is 4 marks)



16 (a) Simplify $a^7 \times a^4$

.....
(1)

(b) Simplify $w^{15} \div w^3$

.....
(1)

(c) Simplify $(8x^5y^3)^2$

.....
(2)

(d) Make t the subject of $c = t^3 - 8v$

.....
(2)

(Total for Question 16 is 6 marks)



17 Danil, Gabriel and Hadley share some money in the ratios 3:5:9

The difference between the amount of money that Gabriel receives and the amount of money that Hadley receives is 196 euros.

Work out the amount of money that Danil receives.

..... euros

(Total for Question 17 is 3 marks)

18 The diagram shows triangle ABC

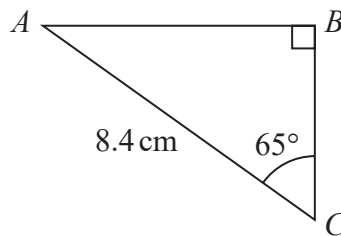


Diagram NOT
accurately drawn

Work out the length of the side AB

Give your answer correct to 3 significant figures.

..... cm

(Total for Question 18 is 3 marks)

