

- 1 A machine fills 1000 bottles in 5 hours.

Work out how many hours it would take the machine to fill 1200 bottles.

(2 marks)

- 2 It costs £0.75 to buy 5 bananas.

Work out how much it would cost to buy 7 bananas.

(2 marks)

- 3 3 tins of beans and 4 tins of tomatoes costs £2.73.

5 tins of beans costs £1.55.

Work out how much one tin of tomatoes costs.

(2 marks)

- 4 There are 500 sheets in a pack of paper. 500 sheets of paper weigh 2.5kg.

Work out the weight of 50 sheets of paper.

(2 marks)

- 5 It takes 2 painters 4 days to complete a job.

Work out how many days it would take 1 painter to complete the same job.

(2 marks)

- 6 It takes 3 machines 2 days to produce a batch of products

Work out how long it would take 1 machine to produce the same batch of products.

(2 marks)

- 7 It takes 3 painters 6 days to complete a job.

Work out how many days it would take 2 painters to complete the same job.

(2 marks)

- 8 It takes 5 machines 6 hours to produce 1000 DVDs

Work out how long it would take 4 machines to produce 1000 DVDs.

(2 marks)

- 9  $x$  is inversely proportional to  $y$ .

$x$  is given by the formula:  $x = \frac{1000}{y}$

Find the value of  $x$  when  $y = 50$

(2 marks)

- 10  $y$  is directly proportional to  $x$ .

$y$  is given by the formula:  $y = 0.4x$

Find the value of  $y$  when  $x = 6$

(2 marks)

- 11 The weight of a piece of wire ( $w$  grams) is directly proportional to its length ( $l$  cm).

$w$  is given by the formula:  $w = 30l$

Find the length of a wire weighing 75 grams.

(2 marks)

- 12 The force,  $F$ , between two magnets is inversely proportional to the square of the distance,  $x$  cm, between them.

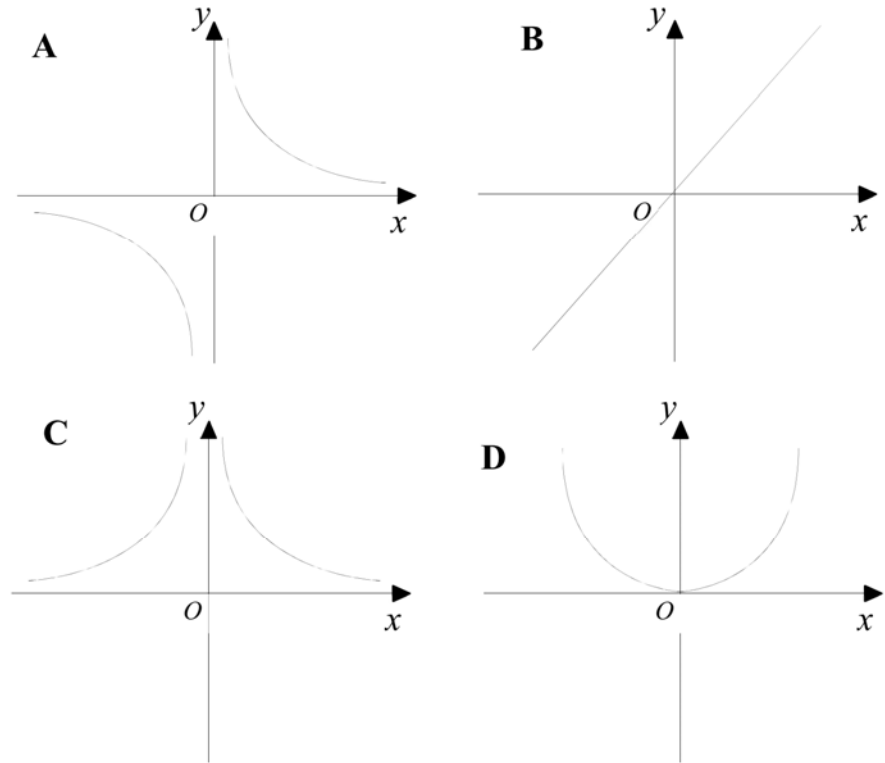
$F$  is given by the formula:

$$F = \frac{36}{x^2}$$

Find the Force when two magnets are 3 cm apart.

(2 marks)

- 13 Here are four graphs.



Sketch each graph and match with a statement in the table below.

Proportionality relationship	Graph letter
$y$ is directly proportional to $x$	
$y$ is inversely proportional to $x$	
$y$ is directly proportional to $x^2$	
$y$ is inversely proportional to $x^2$	

(2 marks)