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# Direct and Inverse Proportion

## Topic Test 3 (20 minutes)

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1  $g$  is directly proportional to  $h$

When  $g = 27$ ,  $h = 3$

Work out  $g$  when  $h = 9$

**[3 marks]**

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Answer \_\_\_\_\_

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2  $b$  is inversely proportional to  $a$

When  $b = 2.5$ ,  $a = 8$

2 (a) Write an equation for  $b$  in terms of  $a$

[3 marks]

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Answer \_\_\_\_\_

2 (b) Find the value of  $b$  when  $a$  is 10

[1 mark]

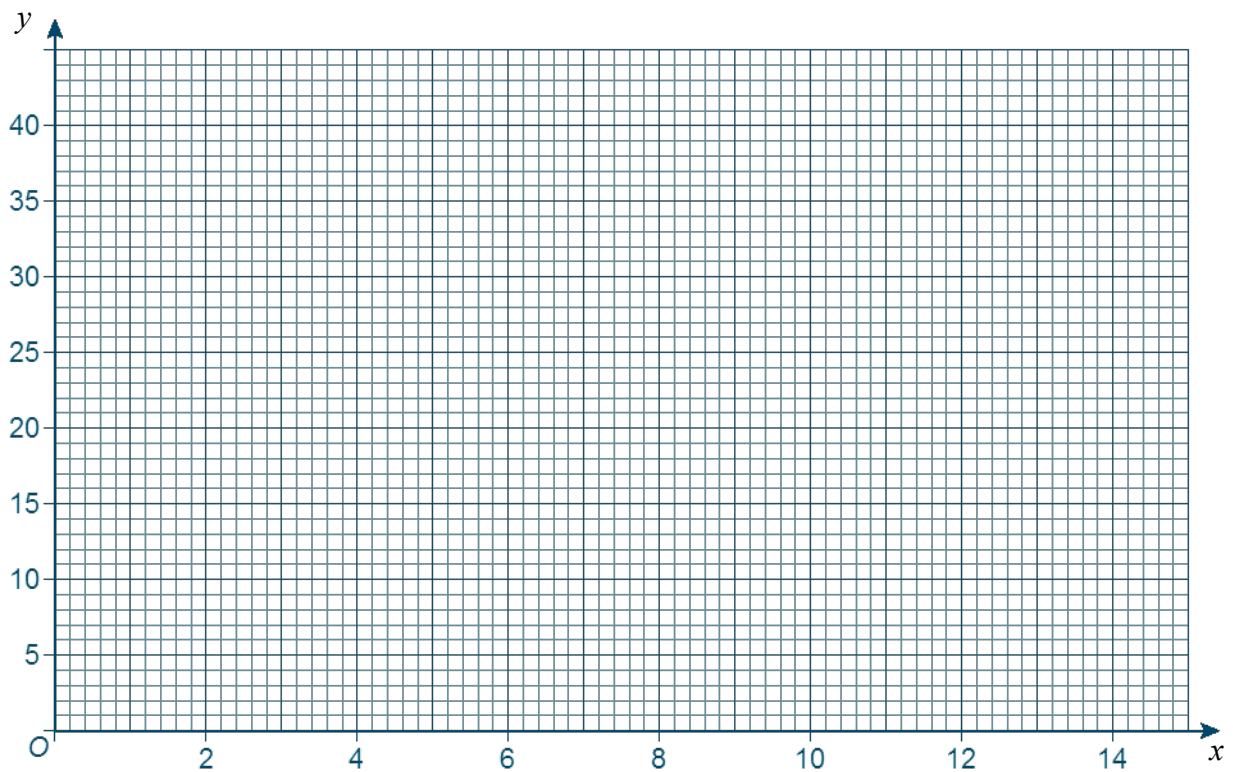
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Answer \_\_\_\_\_

3  $y$  is directly proportional to  $x$   
When  $y = 8$ ,  $x = 2$

3 (a) Draw a graph that can be used to work out  $y$  if you have been given  $x$

[2 marks]



3 (b) Use your graph to work out the value of  $y$  when  $x = 6$

[1 mark]

Answer \_\_\_\_\_

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**4** The distance that a moped can travel in km ( $d$ ) is directly proportional to the number of litres of petrol in its tank ( $p$ ).

The moped can do 150 km with 5 litres of petrol.

**4 (a)** Find an equation connecting  $d$  and  $p$

**[3 marks]**

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Answer \_\_\_\_\_

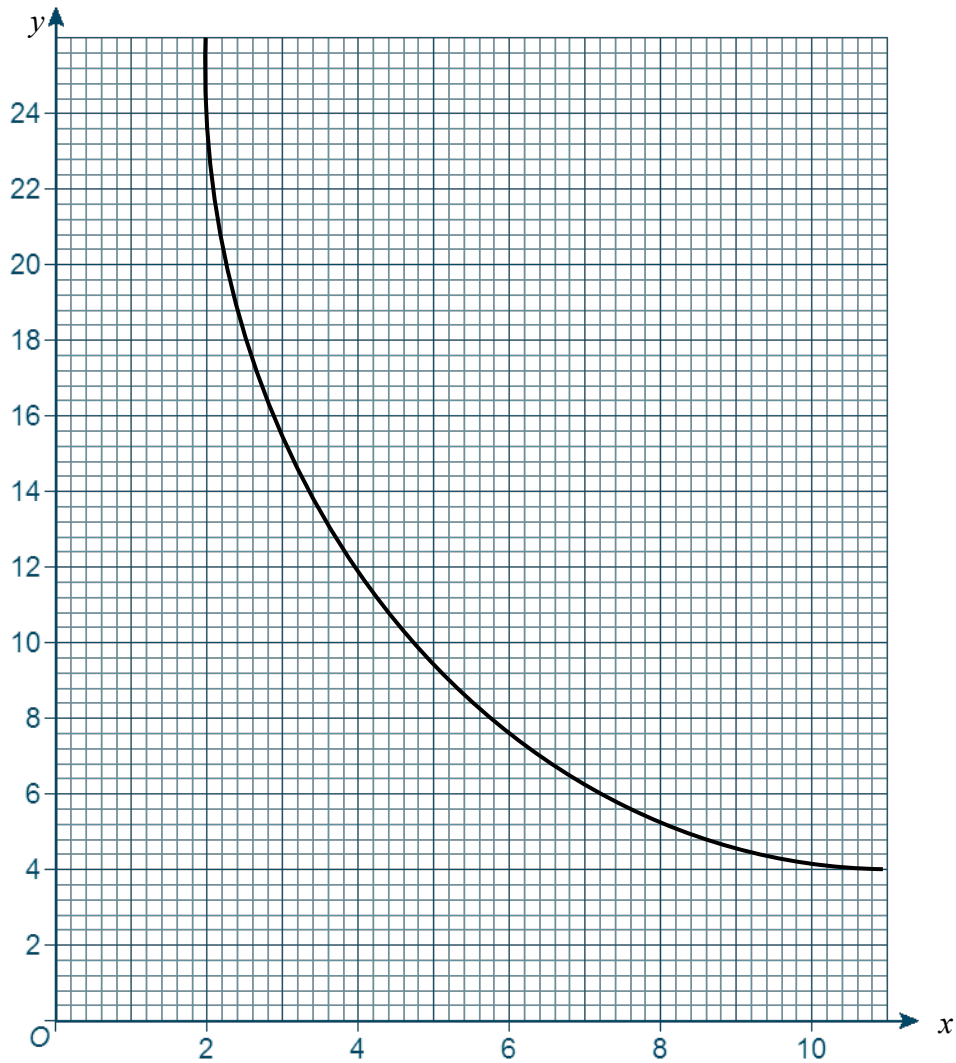
**4 (b)** For the moped to travel 120 km, how many litres of petrol are needed?

**[1 mark]**

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Answer \_\_\_\_\_

- 5 The graph shows that  $y$  is inversely proportional to  $x$



Use the graph to estimate the value of  $y$  when  $x = 5$

[1 mark]

Answer \_\_\_\_\_

**END OF QUESTIONS**