

Name:

Exam Style Questions

## Proportion: Graphs



Equipment needed: Ruler, Pencil and Pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

Video 255b



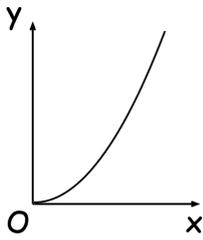
Answers and Video Solutions



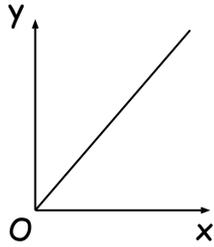
1. Four graphs are shown below.



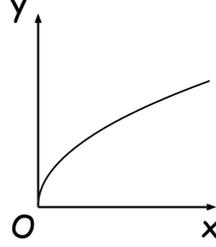
Graph 1



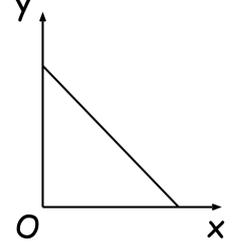
Graph 2



Graph 3



Graph 4



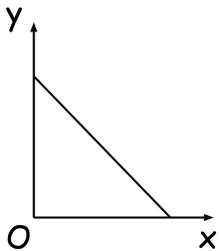
Which graph shows  $y$  is directly proportional to  $x$  ?

Graph.....  
(1)

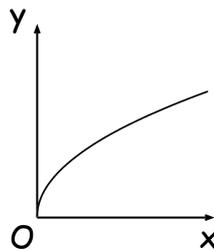
2. Four graphs are shown below.



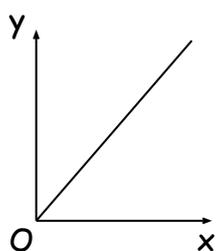
Graph 1



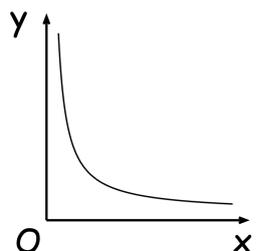
Graph 2



Graph 3



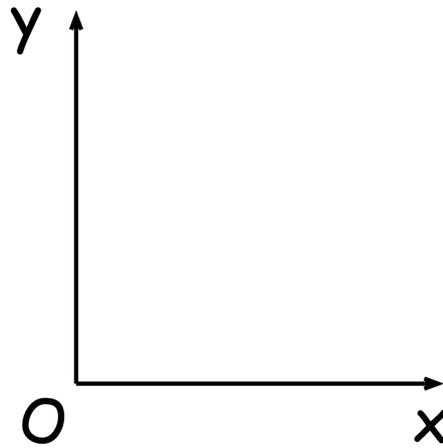
Graph 4



Which graph shows  $y$  is inversely proportional to  $x$  ?

Graph.....  
(1)

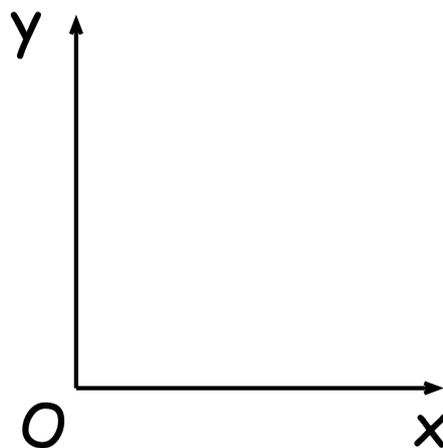
3. Sketch a graph that shows  $y$  is directly proportional to  $x$



(1)

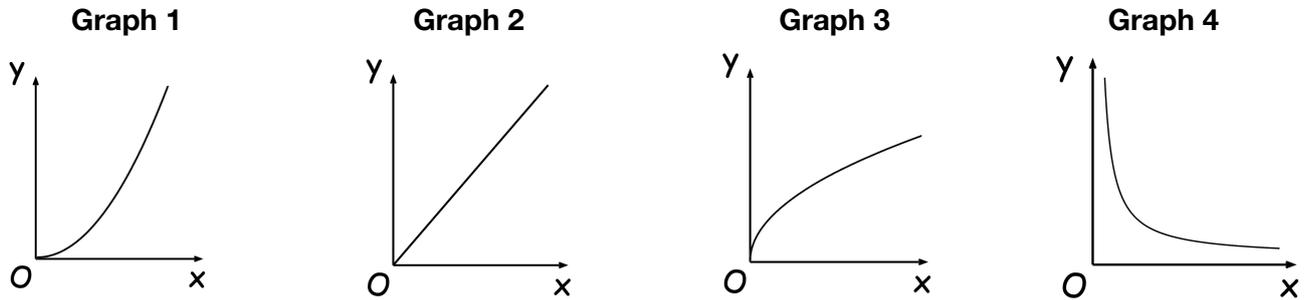
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4. Sketch a graph that shows  $y$  is inversely proportional to  $x$



(1)

5. The four graphs below show different relationships between the variables  $x$  and  $y$ .

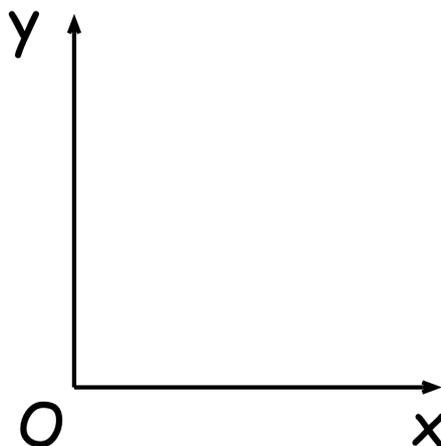


Match each relationship to the correct graph.

Relationship	Graph
$y$ is inversely proportional to $x$	
$y$ is directly proportional to $x^2$	
$y$ is directly proportional to $\sqrt{x}$	
$y$ is directly proportional to $x$	

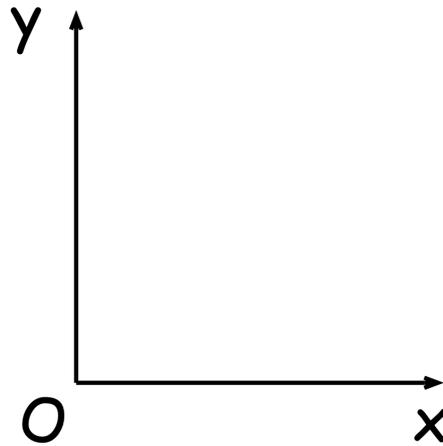
(2)

6. Sketch a graph that shows  $y$  is directly proportional to  $x^2$



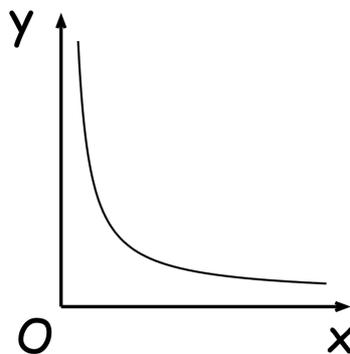
(1)

7. Sketch a graph that shows  $y$  is directly proportional to  $\sqrt{x}$



(1)

- 
8. Shown below is a graph that shows  $y$  is inversely proportional to  $x$

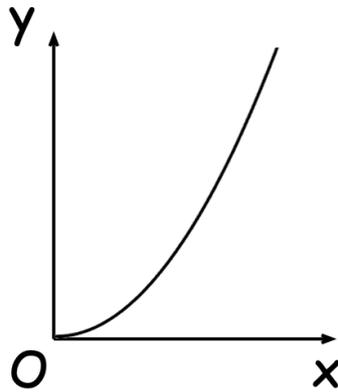


Complete the sentence

When the value of  $x$  is doubled, the value of  $y$  is .....

(1)

9. Shown below is a graph that shows  $y$  is directly proportional to  $x^2$



Complete the sentence

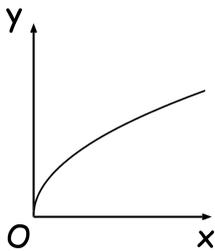
When the value of  $x$  is doubled, the value of  $y$  is .....times larger.

(1)

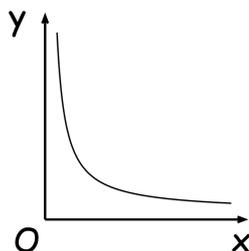
10. The four graphs below show different relationships between the variables  $x$  and  $y$ .



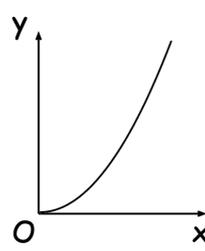
**Graph 1**



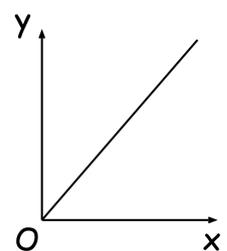
**Graph 2**



**Graph 3**



**Graph 4**



Match each relationship to the correct graph.

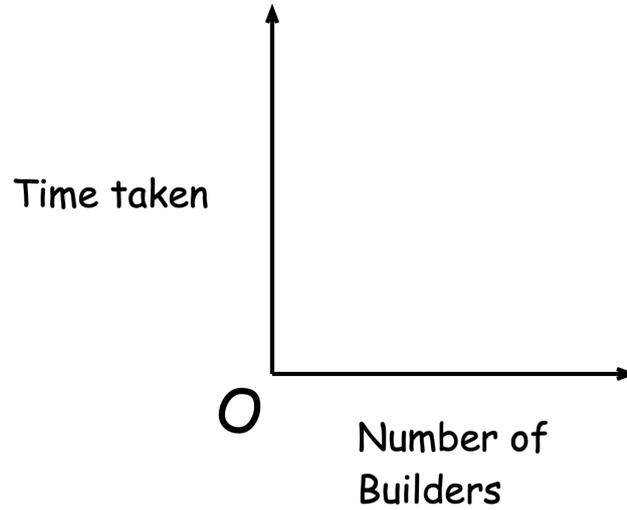
Relationship	Graph
$y \propto x$	
$y \propto \frac{1}{x^2}$	
$y \propto \sqrt{x}$	
$y \propto x^2$	

(2)

11. The time taken to build a school is inversely proportional to the number of builders.



Sketch a graph to show this relationship.

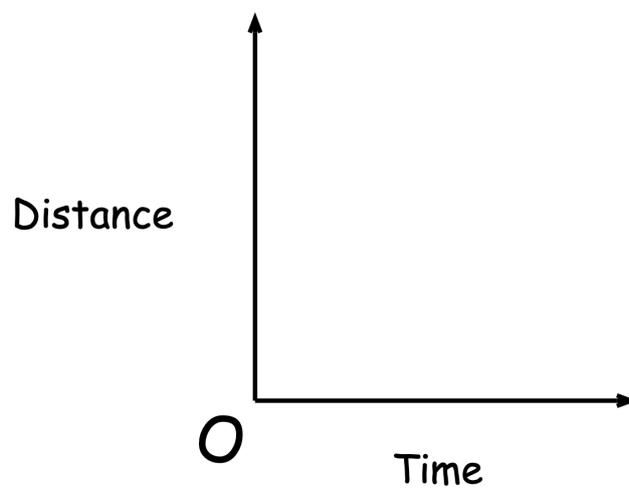


(1)

12. The distance a ball falls when dropped is directly proportional to the square of the time it has been falling.



Sketch a graph to show this relationship.



(1)