

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

Video 255b



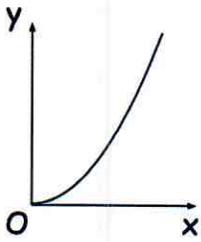
Answers and Video Solutions



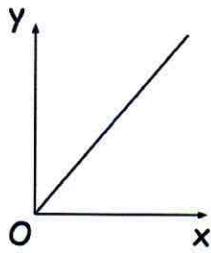
1. Four graphs are shown below.



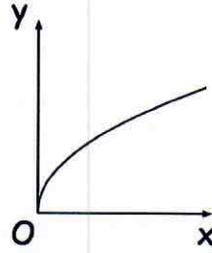
Graph 1



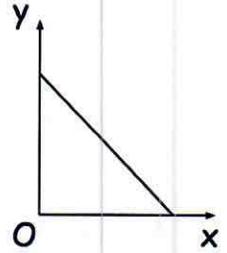
Graph 2



Graph 3



Graph 4



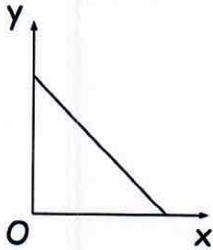
Which graph shows y is directly proportional to x ?

Graph.....2.....
(1)

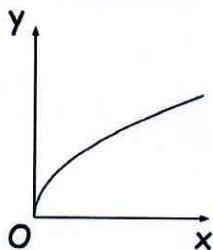
2. Four graphs are shown below.



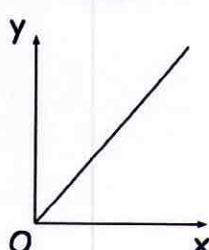
Graph 1



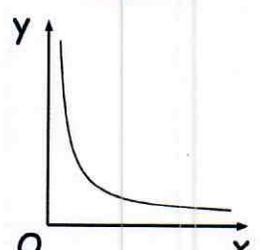
Graph 2



Graph 3



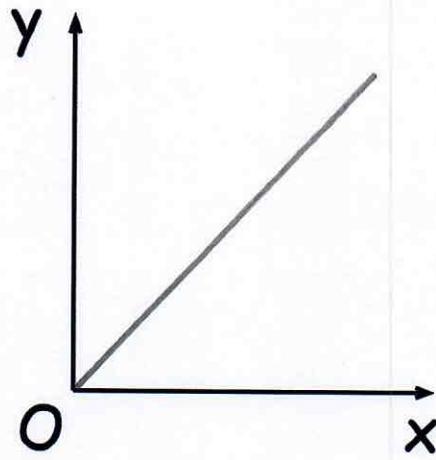
Graph 4



Which graph shows y is inversely proportional to x ?

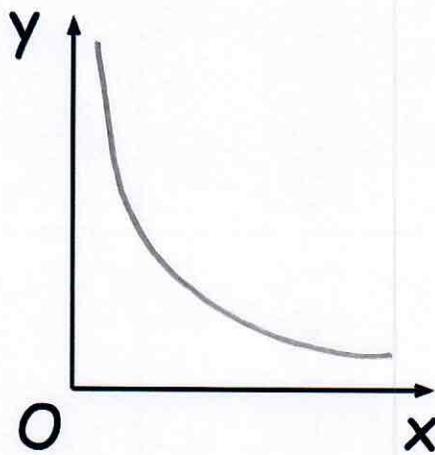
Graph.....4.....
(1)

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



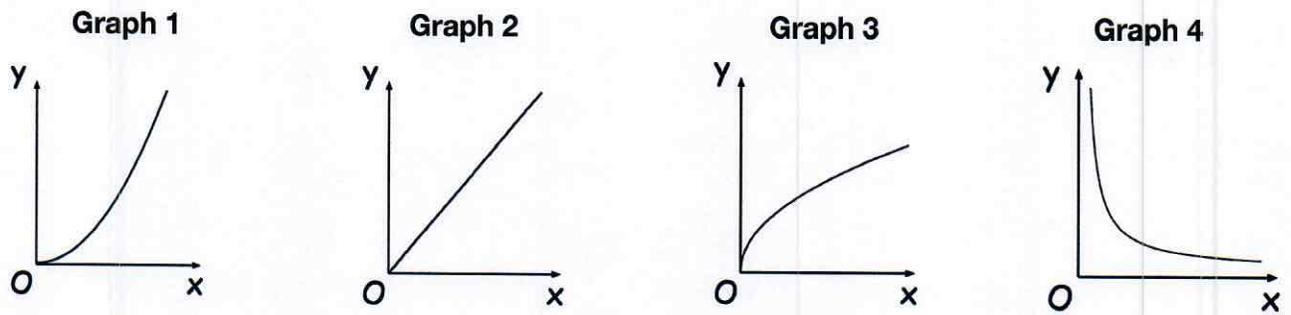
(1)

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 .

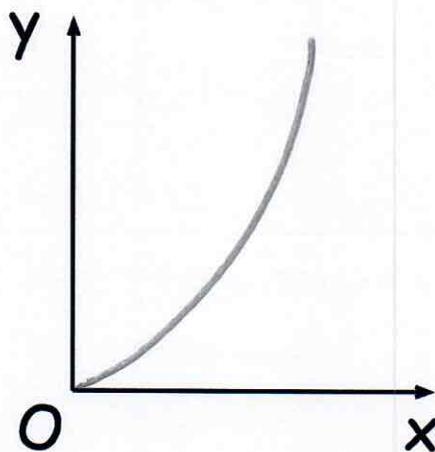


Match each relationship to the correct graph.

Relationship	Graph
y is inversely proportional to x	4
y is directly proportional to x^2	1
y is directly proportional to \sqrt{x}	3
y is directly proportional to x	2

(2)

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

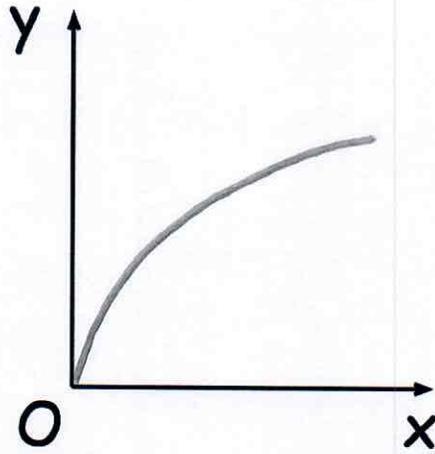


(1)

6.



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

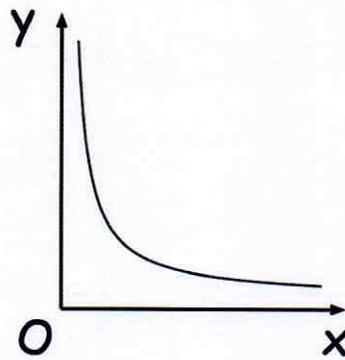


(1)

7.



Shown below is a graph that shows y is inversely proportional to x

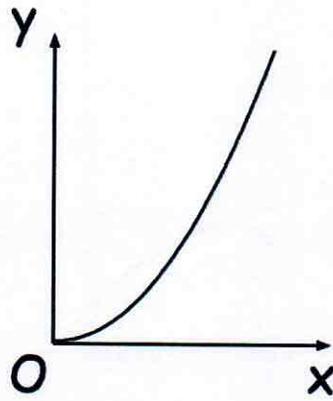


Complete the sentence

When the value of x is doubled, the value of y is ...*halved*.....

(1)

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

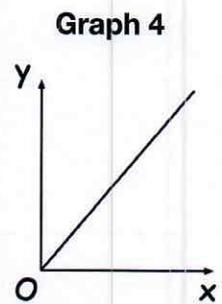
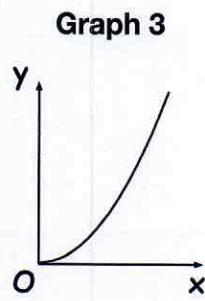
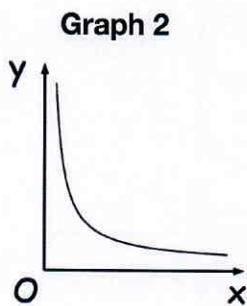
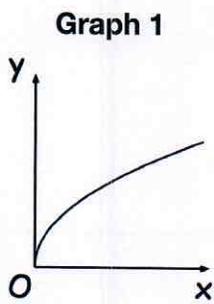


Complete the sentence

When the value of x is doubled, the value of y is⁴.....times larger.

(1)

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



Match each relationship to the correct graph.

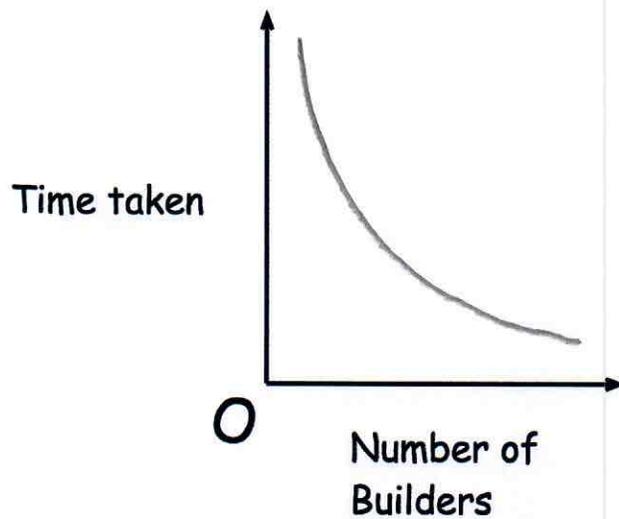
Relationship	Graph
$y \propto x$	4
$y \propto \frac{1}{x^2}$	2
$y \propto \sqrt{x}$	1
$y \propto x^2$	3

(2)

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



Sketch a graph to show this relationship.

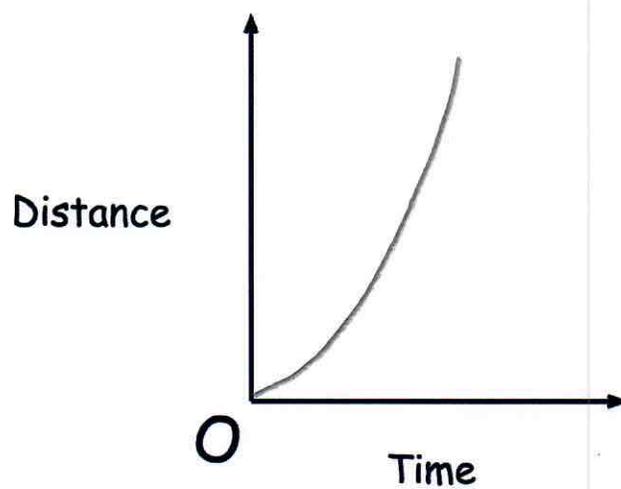


(1)

11. 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)