

5.2 Extension: Graphing Proportional Relationships

Two key features of graphs of proportional relationships

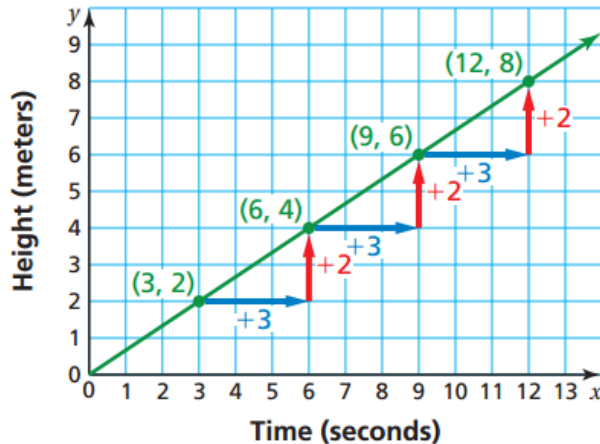
- Graphs must show a _____
- The line of the graph has to go through the _____

Ex:

Time, x (seconds)	Height, y (meters)
3	2
6	4
9	6
12	8

+ 3 (between x=3 and x=6)
+ 3 (between x=6 and x=9)
+ 3 (between x=9 and x=12)

+ 2 (between y=2 and y=4)
+ 2 (between y=4 and y=6)
+ 2 (between y=6 and y=8)

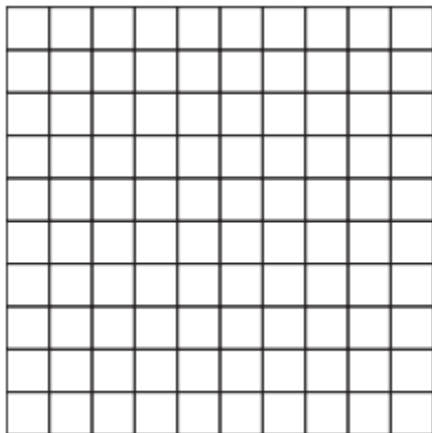


EXAMPLE 1 Determining Whether Two Quantities Are Proportional

Use a graph to tell whether x and y are in a proportional relationship.

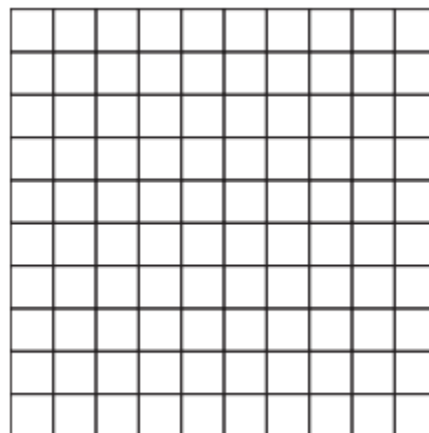
a.

x	2	4	6
y	6	8	10



b.

x	1	2	3
y	2	4	6

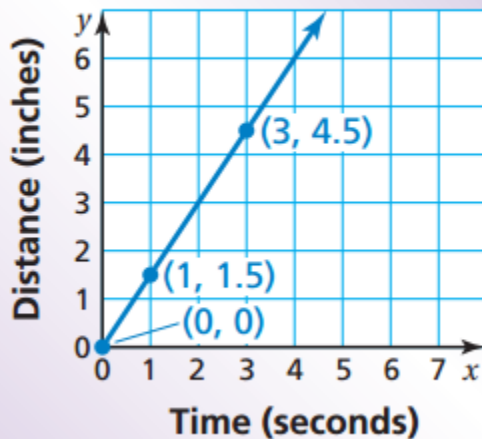


EXAMPLE 2 Interpreting the Graph of a Proportional Relationship

The graph shows that the distance traveled by the Mars rover *Curiosity* is proportional to the time traveled. Interpret each plotted point in the graph.

Interpret means to explain for the situation of the problem.

Curiosity Rover at Top Speed

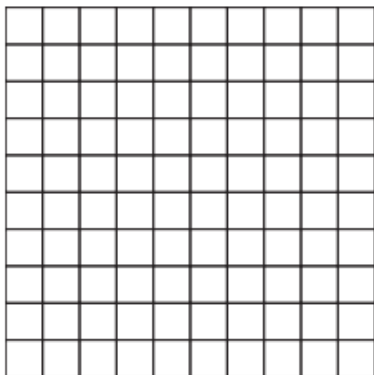


On Your Own:

Use a graph to tell whether x and y are in a proportional relationship.

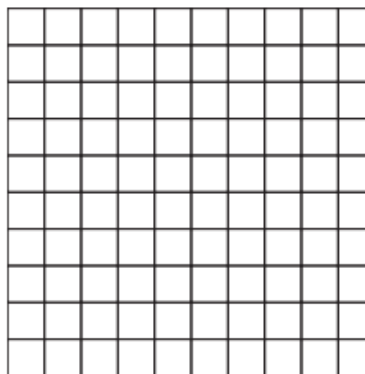
1.

x	1	2	3	4
y	3	4	5	6



2.

x	1	3	5	7
y	0.5	1.5	2.5	3.5



Interpret each plotted point in the graph of the proportional relationship. What is the unit rate?

