

# 5.2: Extension:

## Graphing Proportional Relationships

### 5.2 (extension) Notes

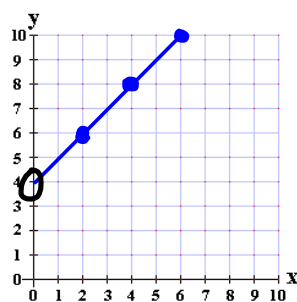
Get out your spiral notebooks and graph paper and ruler too!

#### Example 1:

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

a.

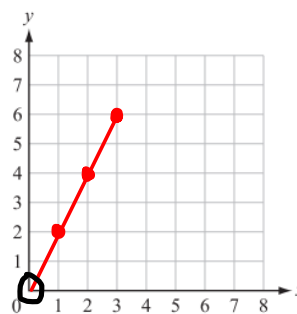
$x$	2	4	6
$y$	6	8	10



No- straight line,  
but doesn't pass  
through the origin  
(0,0).

b.

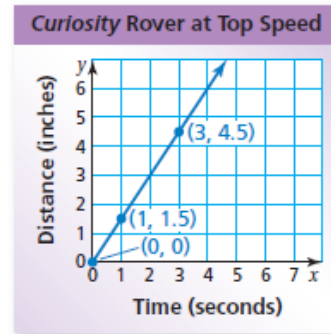
$x$	1	2	3
$y$	2	4	6



Yes- Straight line  
passing through  
the origin (0,0).

**Example 2:**

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.



$(0, 0)$ : At 0 sec, the rover has moved 0 in.

$(1, 1.5)$ : At 1 sec, it has moved 1.5 in.

$(3, 4.5)$ : At 3 sec, it has moved 4.5 in.

**Example 3:**

You pay \$8 for an all-access pass to the front of the line at an amusement park. It will also cost you an additional \$2 for each ride. Your friend did not pay for the all-access pass but will pay \$4 for each ride.

a) Make tables showing the costs to ride up to 3 rides.

<u>You</u>				
Rides	0	1	2	3
Cost	8	10	12	14

<u>Your friend</u>				
Rides	0	1	2	3
Cost	0	4	8	12

b) Which person pays an amount proportional to the number of rides ridden?

Your friend