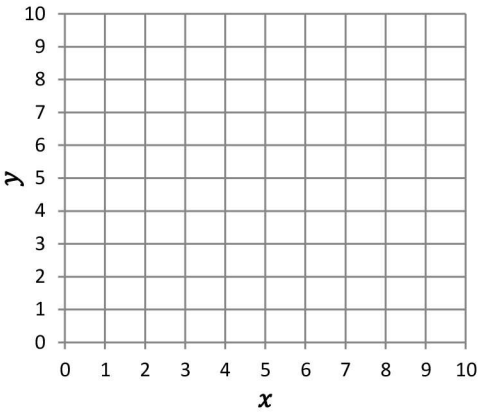


Relationships in Graphs

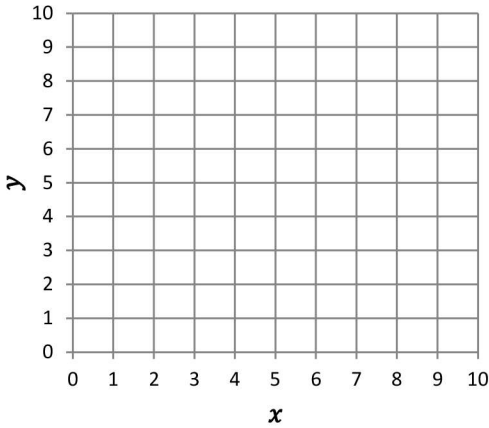
1. The following table gives the number of people picking strawberries in a field and the corresponding number of hours that those people worked picking strawberries. Graph the ordered pairs from the table. Does the graph represent two quantities that are proportional to each other? Explain why or why not.

x	y
1	3
7	1
4	2



2. Use the given values to complete the table. Create quantities proportional to each other and graph them.

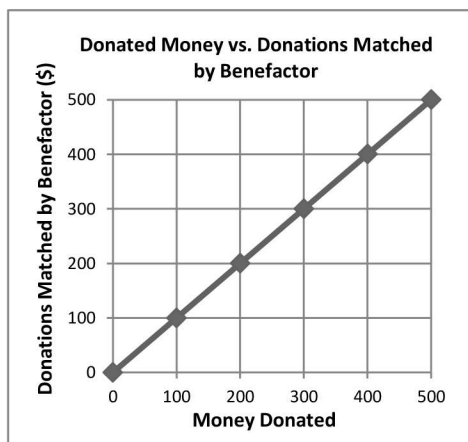
x	y
4	2



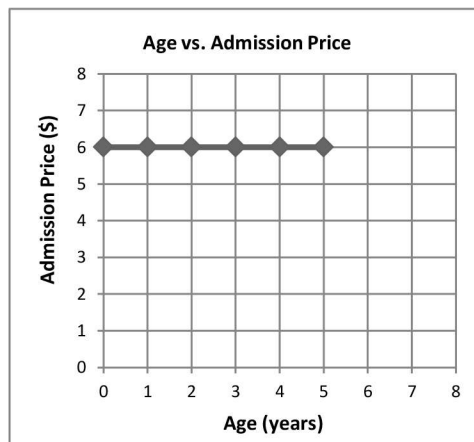
3. a. What are the differences between the graphs in Problems 1 and 2?
- b. What are the similarities in the graphs in Problems 1 and 2?
- c. What makes one graph represent quantities that are proportional to each other and one graph not represent quantities that are proportional to each other in Problems 1 and 2?

- Determine whether or not the following graphs represent two quantities that are proportional to each other. Explain your reasoning.

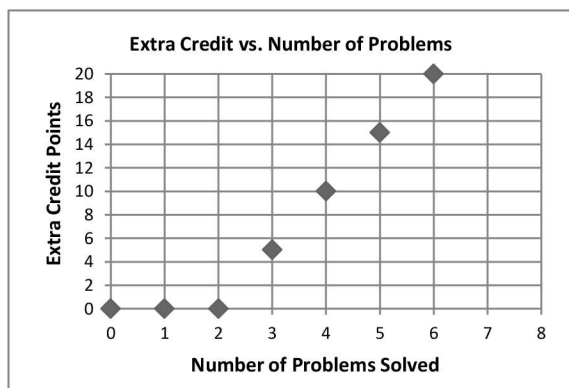
a.



b.

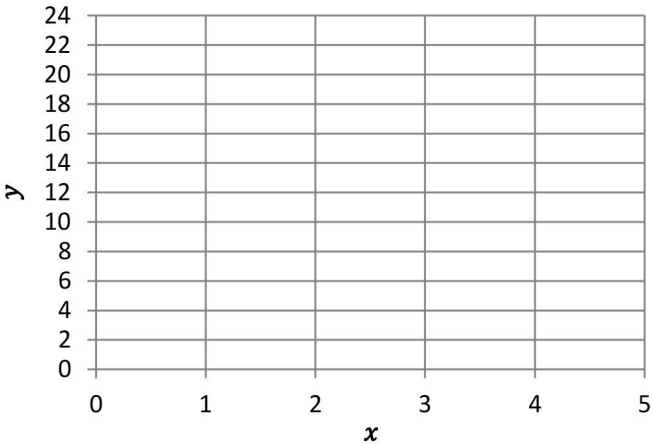


c.



2. Create a table and a graph for the ratios 2: 22, 3 to 15, and 1: 11. Does the graph show that the two quantities are proportional to each other? Explain why or why not.

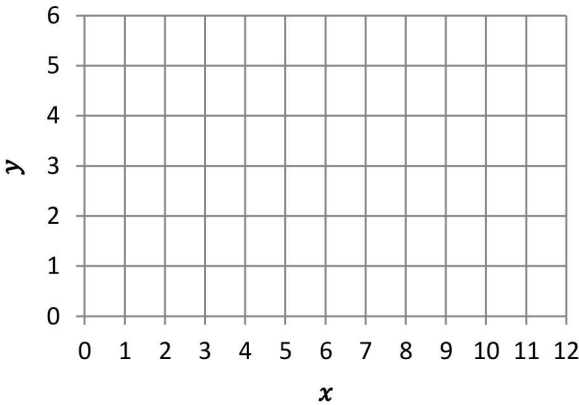
x	y



3. Graph the following tables and identify if the two quantities are proportional to each other on the graph. Explain why or why not.

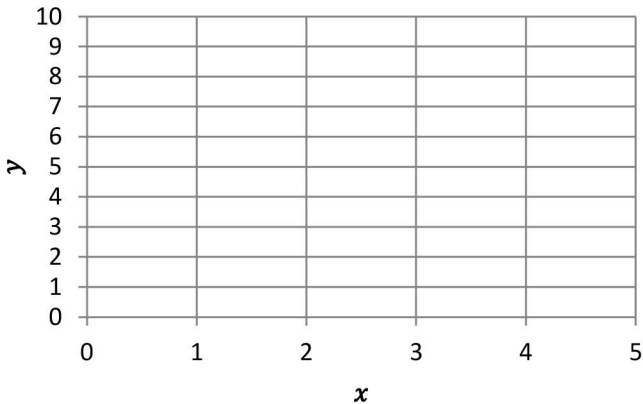
a.

x	y
3	1
6	2
9	3
12	4



b.

x	y
1	4
2	5
3	6
4	7



Exit Ticket Sample Solutions

1.

The following table gives the number of people picking strawberries in a field and the corresponding number of hours that those people worked picking strawberries. Graph the ordered pairs from the table. Does the graph represent two quantities that are proportional to each other? Why or why not?

Although the points fall on a line, the line does not pass through the origin, so the graph does not represent two quantities that are proportional to each other.

x	y
1	3
7	1
4	2
2.

Use the given values to complete the table. Create quantities proportional to each other and graph.

x	y
2	1
4	2
6	3
3.

a.

What are the differences between the graphs in Problems 1 and 2?

The graph in Problem 1 forms a line that slopes downward while the graph in Problem 2 slopes upward.

b.

What are the similarities in the graphs in Problems 1 and 2?

Both graphs form lines, and both graphs include the point (4, 2).

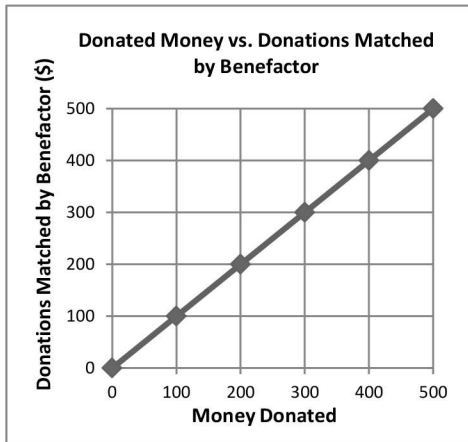
c.

What makes one graph represent quantities that are proportional to each other and one graph not represent quantities that are proportional to each other in Problems 1 and 2?

Although both graphs form lines, the graph that represents quantities that are proportional to each other needs to pass through the origin.

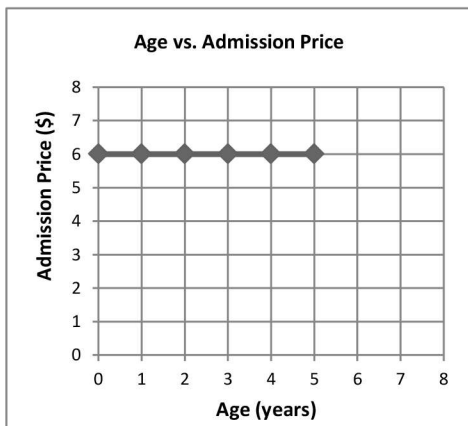
1. Determine whether or not the following graphs represent two quantities that are proportional to each other. Explain your reasoning.

a.



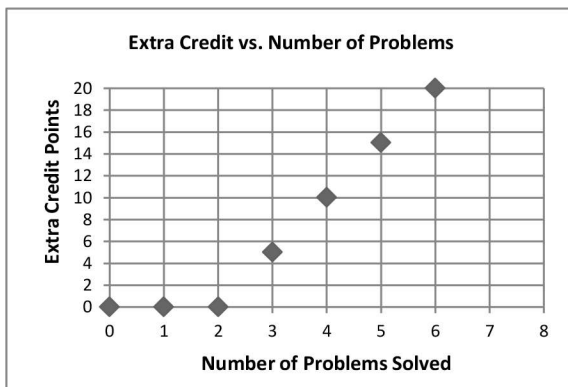
This graph represents two quantities that are proportional to each other because the points appear on a line, and the line that passes through the points would also pass through the origin.

b.



Even though the points appear on a line, the line does not go through the origin. Therefore, this graph does not represent a proportional relationship.

c.

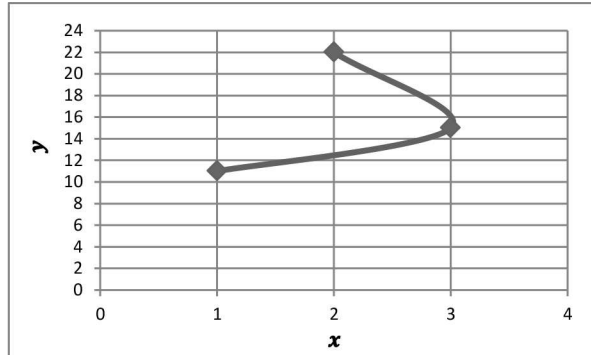


"Even though it goes through the origin, this graph does not show a proportional relationship because the points do not appear on one line.

2. Create a table and a graph for the ratios 2 : 22, 3 to 15, and 1 : 11. Does the graph show that the two quantities are proportional to each other? Explain why or why not.

This graph does not because the points do not appear on a line that goes through the origin.

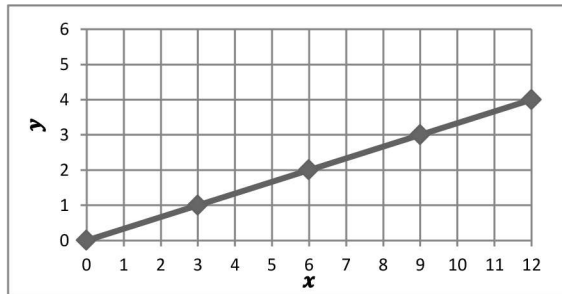
x	y
2	22
3	15
1	11



3. Graph the following tables and identify if the two quantities are proportional to each other on the graph. Explain why or why not.

a.

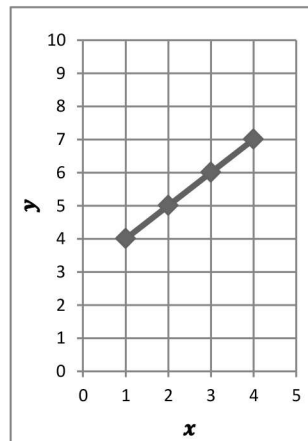
x	y
3	1
6	2
9	3
12	4



Yes, because the graph of the relationship is a straight line that passes through the origin

b.

x	y
1	4
2	5
3	6
4	7



No, because the graph does not pass through the origin.