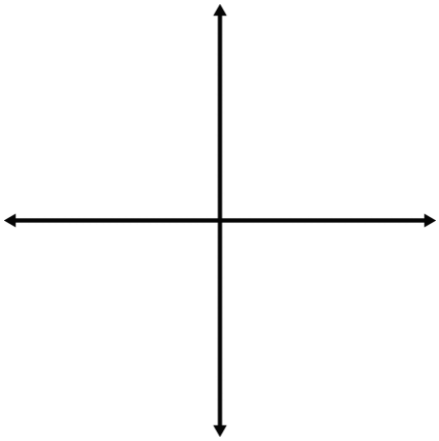
Name_____ Date _____

Mr. Tallman Math 7

Lesson #28 – Proportional Relationships on Graphs

A **coordinate plane** is a 2 dimensional surface in which we can plot points.

A coordinate plane has two **axes**. The horizontal axis is called the _____. The vertical axis is called the _____.

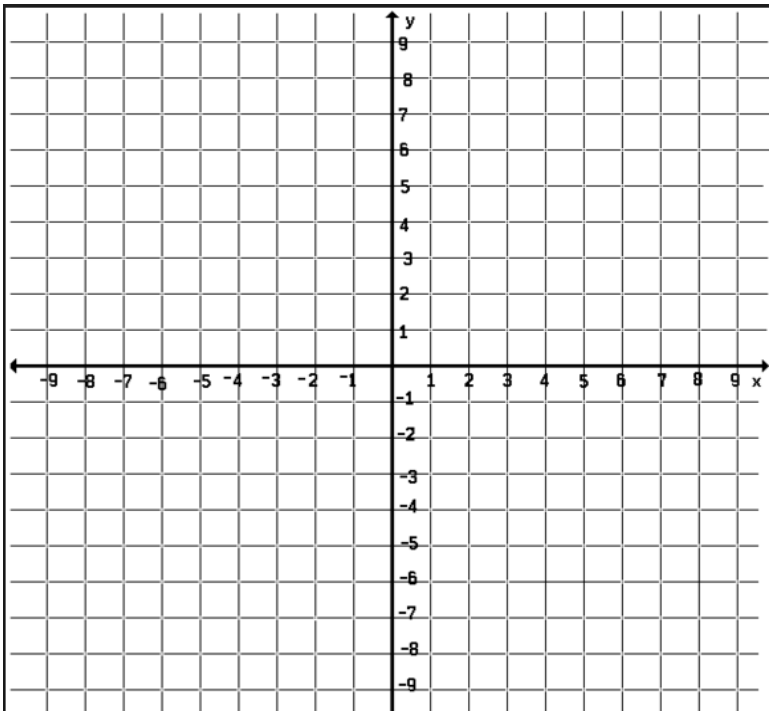


An **ordered pair** is a point which represents a location on the coordinate plane.

An **ordered pair** is always written as (_____ , _____)

Example 1) Plot the following points on the coordinate plane below.

A) (2, 3) B) (-3, 8) C) (-4, -2) D) (5, -5)



Recall:

Isaiah:

Isaiah sold candy bars to help raise money for his scouting troop. The table shows the amount of candy he sold to the amount of candy he received.

Candy Bars Sold (x)	Money Received (y)
2	$3
4	$5
8	$8
12	$14

Is the amount of candy bars sold proportional to the money he received? How do you know?

_____

_____

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Jason:

Jason sold candy bars to help raise money for his scouting troop. The table shows the amount of candy he sold to the amount of candy he received.

Candy Bars Sold (x)	Money Received (y)
2	$3
4	$5
8	$8
12	$14

Is the amount of candy bars sold proportional to the money he received? How do you know?

_____

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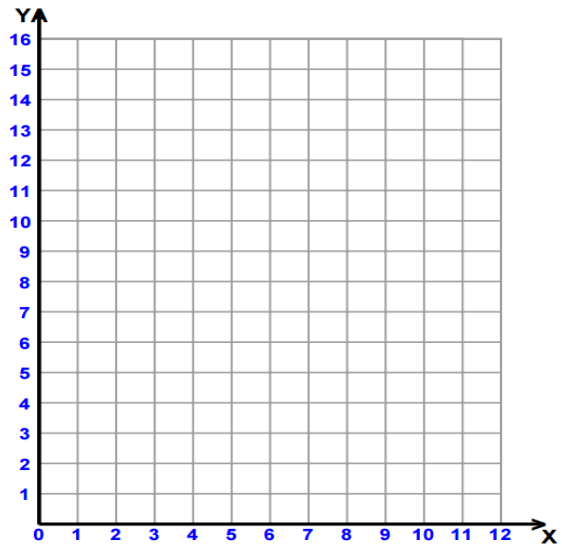
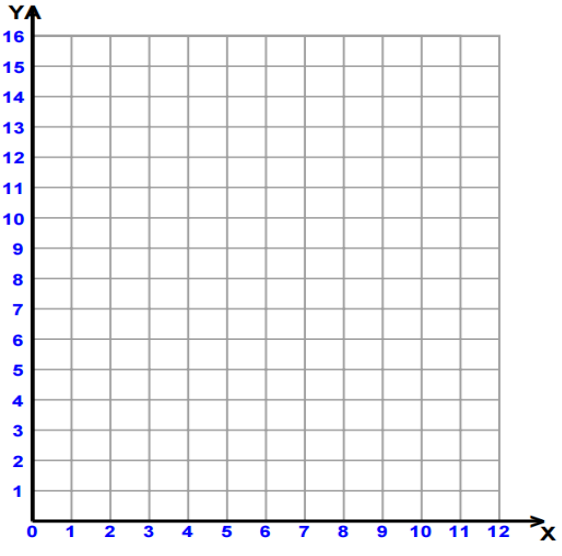
Plot the ordered pairs for all the values of Isaiah's table.

Candy Bars Sold (x)	Money Received (y)
2	$3
4	$5
8	$8
12	$14



Plot the ordered pairs for all the values of Jason's table.

Candy Bars Sold (x)	Money Received (y)
2	$3
4	$5
8	$8
12	$14



Characteristics of proportional relationships on graphs:

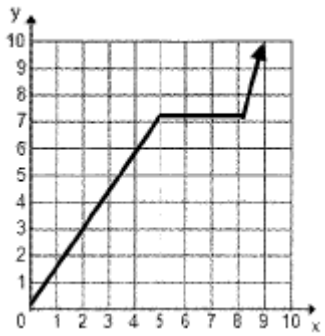
1)

2)

Try it!

Determine if the following graphs show a proportional relationship between two quantities. Explain your reasoning.

1)



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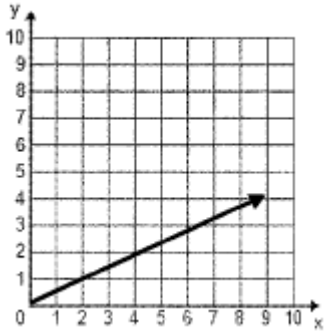
2)



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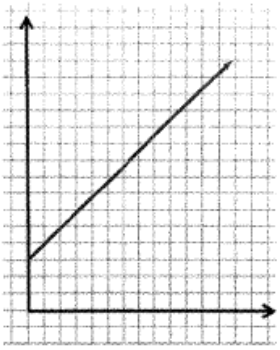
3)



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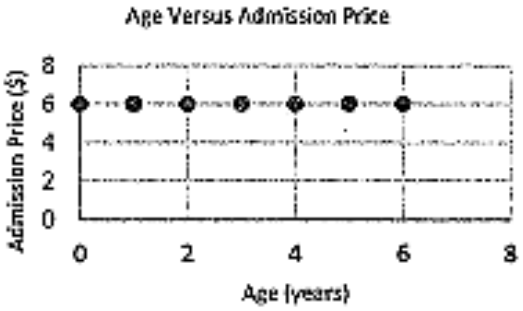
4)



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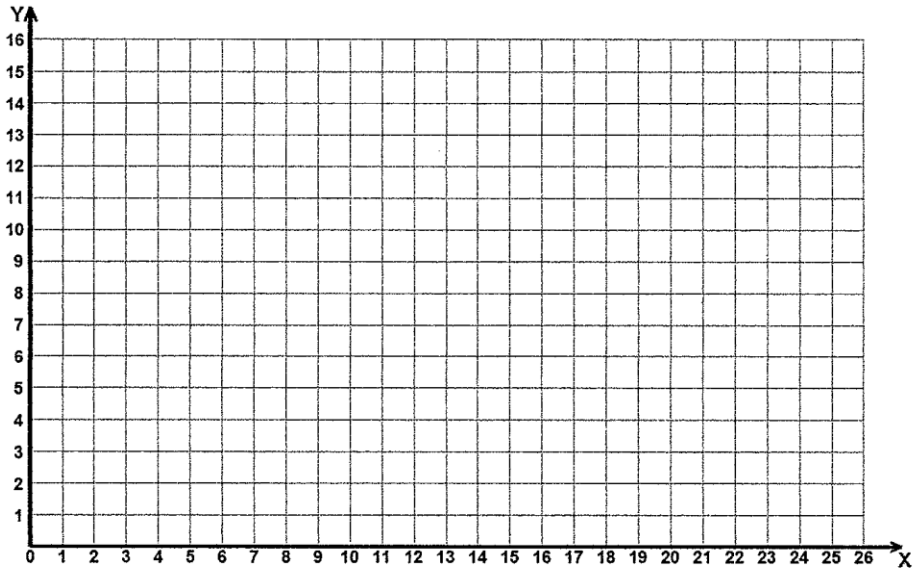
5) Use the table below to graph the following relationship. Tell whether the relationship is proportional or not proportional. Explain your reasoning.

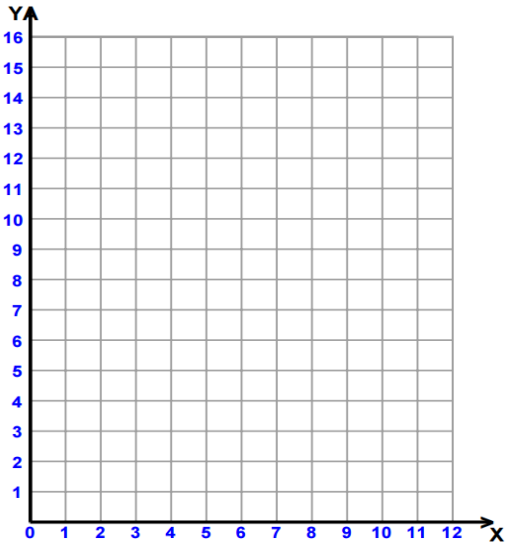
x	y
2	3
4	6
8	12
10	15



6) The table below shows the number of calories an athlete burned per minute of exercise.

Part A) Graph the relationship that is shown on the table below.

Calories Burned	
Number of Minutes	Number of Calories
0	0
1	4
2	8
3	15



Sum it up!

List the two characteristics of proportional graphs: