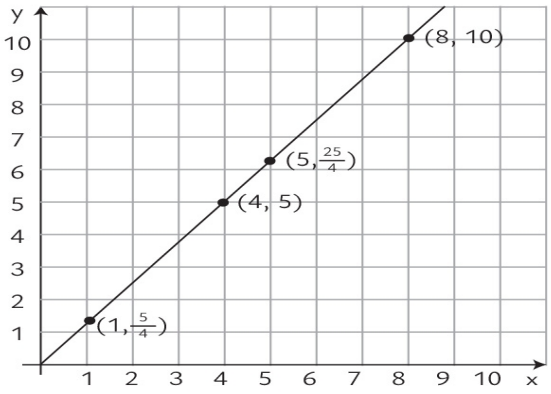
Name: _____ Date: _____

PROPORTIONAL RELATIONSHIPS

Proportional relationships can be shown using tables, graphs, and equations.
For the relationship represented in this table, y is proportional to x. We can see in the table that is the constant of proportionality 5/4 because it's the y value when x is 1.
The equation $y = 5/4\ x$ also represents this relationship.

x	4	5	8	1
y	5	$\frac{25}{4}$	10	$\frac{5}{4}$

Here is the graph of this relationship.



If y represents the distance in feet that a snail crawls in x minutes, then the point (4,5) tells us that the snail can crawl 5 feet in 4 minutes.

If y represents the cups of yogurt and x represents the teaspoons of cinnamon in a recipe for fruit dip, then the point (4.5) tells us that you can mix 4 teaspoons of cinnamon with 5 cups of yogurt to make this fruit dip.

We can find the constant of proportionality by looking at the graph, because 5/4 is the y-coordinate of the point on the graph where the x-coordinate is 1. This could mean the snail is traveling 5/4 feet per minute or that the recipe calls for 1 1/4 cups of yogurt for every teaspoon of cinnamon.

In general, when y is proportional to x, the corresponding constant of proportionality is the y-value when x = 1.