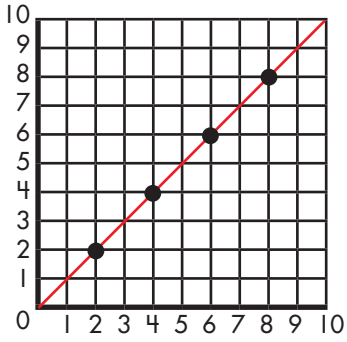
NAME _____

Lesson 4.5 Proportional Relationships on the Coordinate Plane

When proportional relationships are graphed, the points the line runs through can be used to find the constant of proportionality.



This line runs through points (2, 2), (4, 4), (6, 6), and (8, 8).

First, find the proportion of this relationship by choosing one point and inserting its coordinates into the proportion equation.

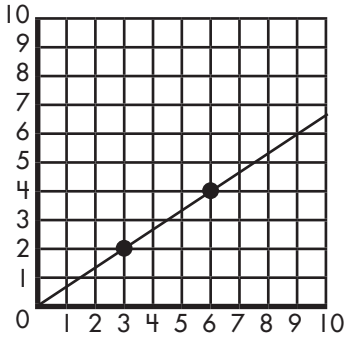
$k = \frac{y_2 - y_1}{x_2 - x_1}$ or $k = \frac{4 - 2}{4 - 2} = \frac{2}{2} = 1$

The constant of proportionality for this line is 1.

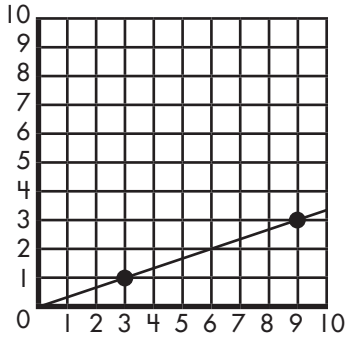
Find the constant of proportionality for each graph.

a **b**

1.

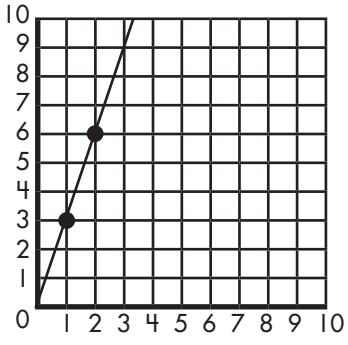


$k =$ _____

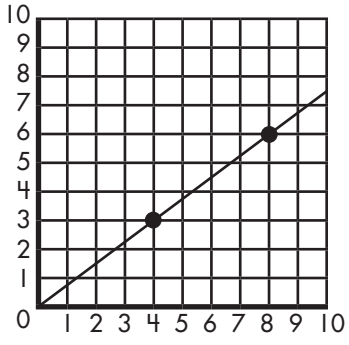


$k =$ _____

2.



$k =$ _____



$k =$ _____