

Algebra 1            3.6

Write an equation for a proportional relationship

Write an equation for a nonproportional relationship

linear

slope

constant of variation

y-intercept

directly proportional

proportional

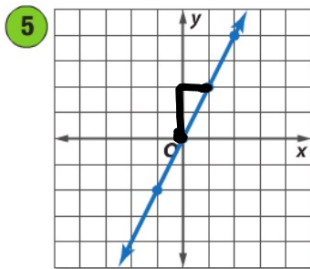
nonproportional

whiteboards(?)

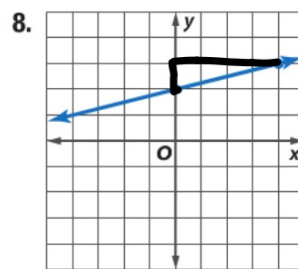
 **KeyConcept** Proportional Relationship

Words

A relationship is proportional if its equation is of the form  $y = kx$ ,  $k \neq 0$ . The graph passes through  $(0, 0)$ .



$$y = 2x$$



$$y = \frac{1}{4}x + 2$$

Guided Practice

1. **CHARITY** A professional soccer team is donating money to a local charity for each goal they score.

Number of Goals	1	2	3	4	5
Donation (\$)	75	150	225	300	375

$d = 75g$

- A. Graph the data. What can you deduce from the pattern about the relationship between the number of goals and the money donated?
- B. Write an equation to describe this relationship.
- C. Use this equation to predict how much money will be donated for 12 goals.

$d = 75 \cdot 12$   
 $\$900$



