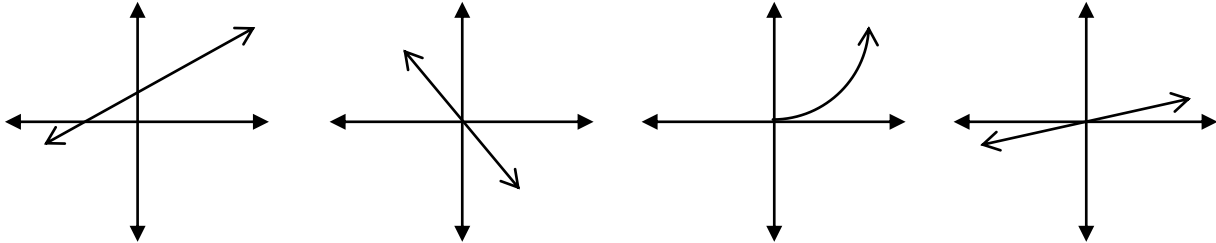


Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Identifying Proportional Relationships Linear Functions

Which of the following graphs represent a proportional relationship? Explain.



Which of the following equations represent a proportional relationship? Explain.

$Y = 3x + 6$      
  $y = \frac{1}{2}x$      
  $y = 5$      
  $y = 3x^2$      
  $y = -5x$

Which of the following sets of data are proportional? Explain.

{ (22, 11), (30, 15), (46, 23) }

{ (7, 7), (8, 9), (9, 11), (11, 15) }

X	Y
0	4
1	2
2	0
4	-4

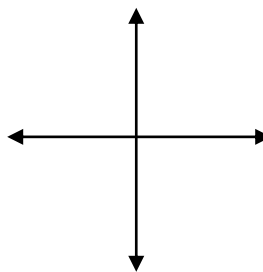
X	Y
1	-5
2	-10
3	-15
10	-50

Which of the following represent a proportional relationship? (check all that apply)

- the cost of a plumber at \$30 an hour and a \$25 service call fee
- the cost of apples at \$1.79 a pound
- total number of people at a party if there are exactly 4 people per table
- total number of chairs if there are exactly 4 per table and 10 lined up along the wall
- distance run at 7 miles per hour

## Exploring Proportional Relationships

Sketch a graph representing a proportional relationship:



Create a table of data that represents a proportional relationship:

<b>x</b>				
<b>y</b>				

Write an equation that represents a proportional relationship: \_\_\_\_\_

Write an equation that represents a non-proportional relationship: \_\_\_\_\_

Write an equation for a direct variation relationship having a proportionality constant of 5: \_\_\_\_\_

Complete the table below to make it a proportional relationship.

X	Y
1	6
2	
3	
10	

Write the equation that represents the proportional data. \_\_\_\_\_

What is the constant of proportionality for this data? \_\_\_\_\_

Complete the table for a direct variation relationship with a proportionality constant of  $\frac{1}{2}$ .

X	Y
0	
2	
4	
10	

Write the equation that represents the data. \_\_\_\_\_

The cost of grapes is a proportional relationship with each pound costing \$1.29. Write an equation to model this situation.

\_\_\_\_\_