REVIEW: Direct Variation

Name _____

Key Concept and Vocabulary

y is directly proportional to x.

scale factor

$y = kx$

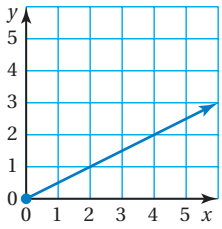
output input

Visual Model

For positive values of x and y, as x increases, y increases.

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

through origin



Skill Example

1. **Equation:** $y = 2x$

Table:

x	0	1	2	3	4	5
y	0	2	4	6	8	10

Words: y is twice the value of x.

Application Example

2. The amount y of gasoline a car uses is $\frac{1}{20}$ times the number x of miles it travels. Make a table to show this relationship.

x	0	20	40	60	80	100
y	0	1	2	3	4	5

y is directly proportional to x.

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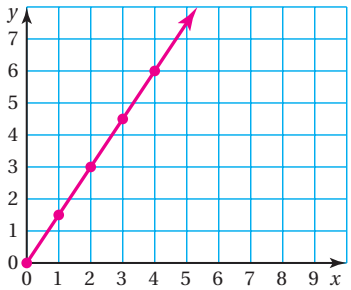
Check your answers at BigIdeasMath.com.

Complete the table. Then sketch the graph.

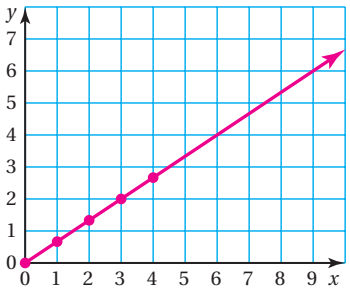
3. $y = 1.5x$

x	y
0	0
1	1.5
2	3
3	4.5
4	6



4. $y = \frac{2}{3}x$

x	y
0	0
1	$\frac{2}{3}$
2	$\frac{4}{3}$
3	2
4	$\frac{8}{3}$



WRITING AN EQUATION **Write a direct variation equation for the table.**

5.

x	0	1	2	3	4
y	0	3	6	9	12

$y = 3x$

6.

x	0	1	2	3	4
y	0	0.4	0.8	1.2	1.6

$y = 0.4x$

7. **WALRUS** The amount y that a walrus eats is directly proportional to its weight x. A 4000 pound walrus eats 20 pounds each day. How much does a 2000 pound walrus eat each day? 10 lb