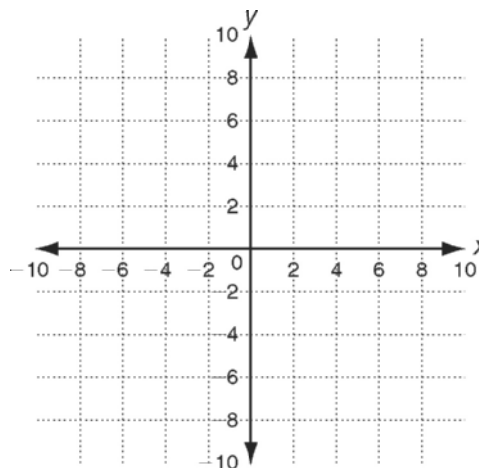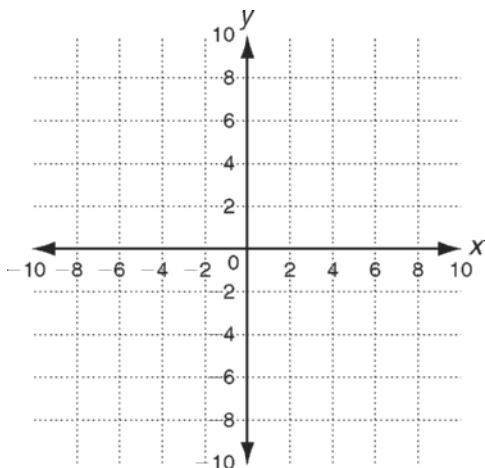Name _____ Date _____ Class_____

Practice B
Variation Functions

Write and graph each function.

1. *y* varies directly as *x*, and
   y = 30 when *x* = –6.

2. *y* varies inversely as *x*, and
   y = 5 when *x* = 3.

Determine whether each data set represents a direct variation, an inverse variation, or neither.

3.

x	8	12	16
y	2	3	4

4.

x	3	1	0.5
y	5	15	30

Solve.

5. The number of chaperones, *c*, needed for the class trip varies directly as the number of students, *s*, going on the trip, and *c* = 7 when *s* = 56. How many chaperones are needed if 104 students go on the class trip?
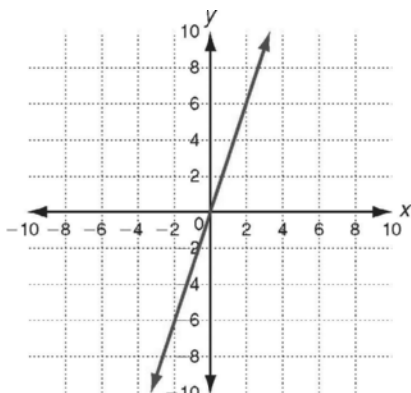
6. The owner of a bookstore developed a model for determining the price of rare comic books. The price, *P*, of each book should vary directly with the number of people, *N*, that have requested the book and inversely to the number of such books in existence, *M*. If *N* = 10 people, *M* = 10,000 copies, and *P* = $5, then find *P* for *N* = 200 people and *M* = 100 copies.
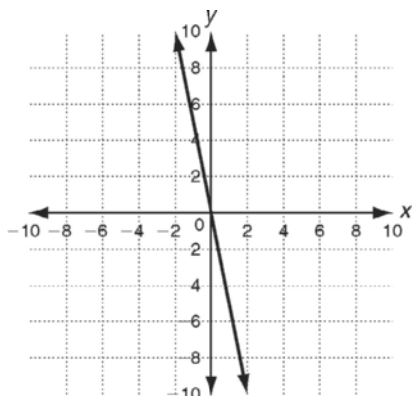
Answer Key

LESSON 8-1

Practice A

1. a. $k = 5$

   b. Direct

   c. $x = 2$

   d. $y = 35$

2. a. $k = 2$

   b. Inverse

   c. $x = 0.5$

   d. $y = 2$

3. Inverse   4. Direct

5. Direct

6. a. $k = 3$

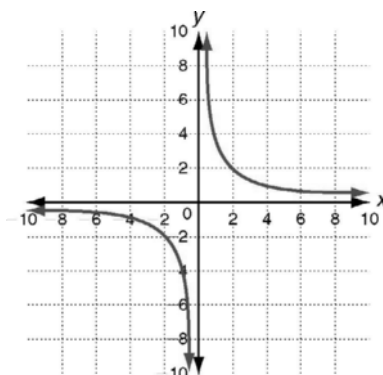   b. $y = 3x$

   c.

7. 14 mi
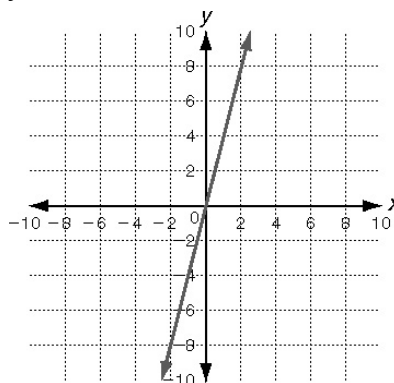
Practice B

1. $y = -5x$

2. $y = \dfrac{15}{x}$

3. In each case, $\dfrac{y}{x} = \dfrac{1}{4}$; the ratio is constant, so this represents a direct variation.

4. In each case, $xy = 15$; the product is constant, so this represents an inverse variation.

5. 13 chaperones   6. $10,000

Practice C

1. $y = 4x$

2. $y = \dfrac{1.5}{x}$

Holt Algebra 2