Name: _____   Date: _____
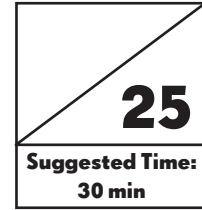
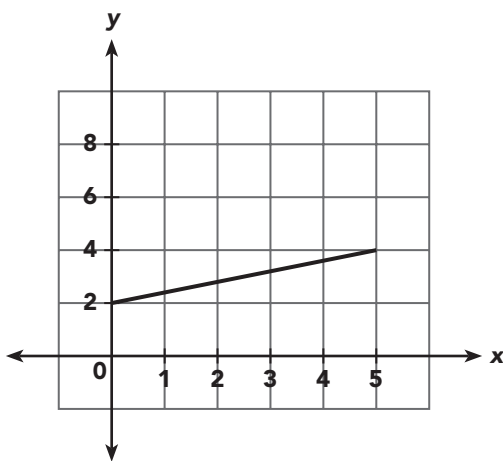**CHAPTER TEST A**

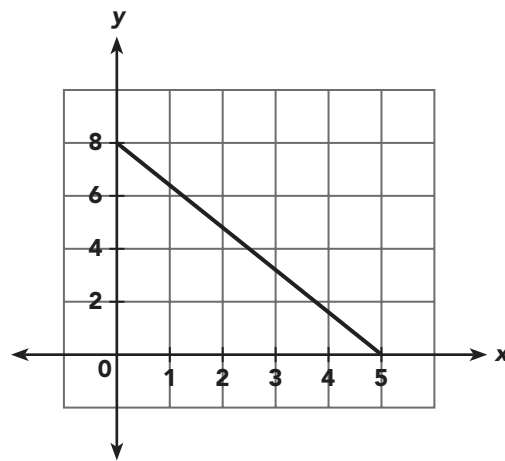**4** **Lines and Linear Equations**

Concepts and Skills (10 × 1 point = 10 points)

Find the slope of each line.

1.

2.

Find the slope of the line passing through each pair of points.

3. A (4, 8) and B (2, 0)

4. P (0, 6) and Q (3, 0)

Use the given slope and *y*-intercept of a line to write an equation in slope-intercept form.

5. Slope, $m = 2$
   y-intercept, $b = 3$

6. Slope, $m = -3$
   y-intercept, $b = 4$

Write an equation of the line that passes through each given point and is parallel to $y = -3x + 8$.

7. (5, 2)

8. (0, 1)

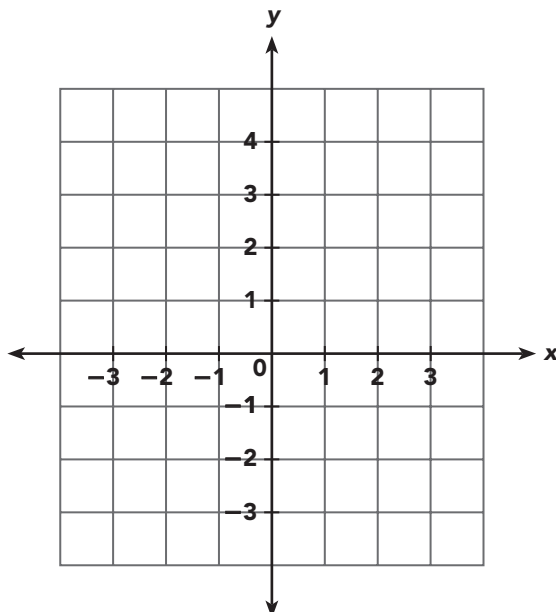**Write an equation of the line with the given slope that passes through the given point.**

9. Slope, $m = -1$; (0, 2)

10. Slope, $m = \dfrac{1}{2}$; (2, −1)

Problem Solving

(Questions 11 to 13: 3 × 2 points = 6 points
Questions 14 to 16: 3 × 3 points = 9 points)

Solve. Show your work.

11. Graph the line with slope, $m = -2$ that passes through the point (−1, 4) on the coordinate plane below.

12. Two cable cars are descending from two separate stations. The altitude,
y feet, of Cable Car A after x minutes is given by the equation $y = -30x + 700$.
The graph shows the altitude, y feet, of Cable Car B after x minutes.

Altitude of Cable Car B
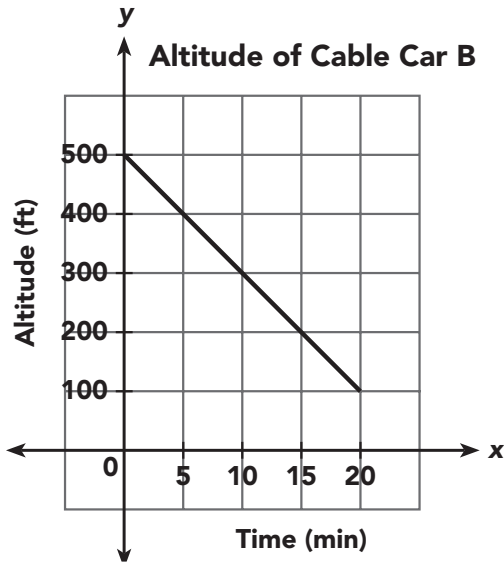
a) Which cable car is descending from a higher altitude?

b) Which cable car is descending at a faster rate?

13. Car rental companies A and B each requires a deposit of *D* dollars, to rent a car, plus a fixed mileage charge.

Total Charges for Car Rental Companies A and B
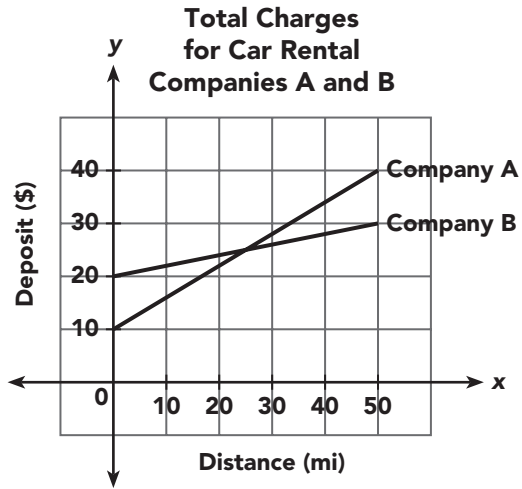
a) Find the amount each car rental company requires for the deposit.

b) Which company charges a greater amount per mile?