Name: _____ Date: _____

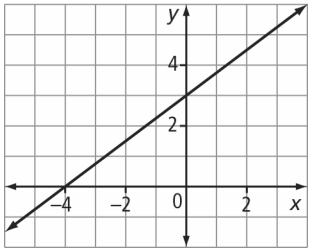
BLM 7–11

Chapter 7 Test

Multiple Choice

For #1 to 5, select the best answer.

1. Which of the statements is true for the graph shown?



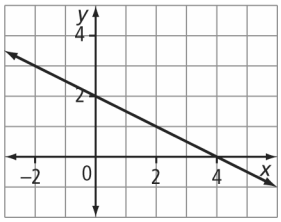
A The slope is $-\frac{3}{4}$.

B The intercepts are at –4 and 3.

C The x-intercept is at (–4, 0).

D The y-intercept is at (3, 0).

2. Which of the statements is true for the graph shown?



A The domain is $\{x | x \geq 4, x \in \mathrm{R}\}$.

B The range is $\{y | y \leq 4, y \in \mathrm{R}\}$.

C The domain and range are both [2, 4].

D The domain and range are both (∞, ∞).

3. To rewrite the equation $-2x + 2y = 5$ in the form $y = mx + b$, a possible approach could be

A subtract $2x$ from both sides and then divide both sides by 2

B add $2x$ to both sides and then divide both sides by 2

C add $-2x$ to both sides and then multiply both sides by 2

D subtract $2x$ from both sides and then multiply both sides by 2

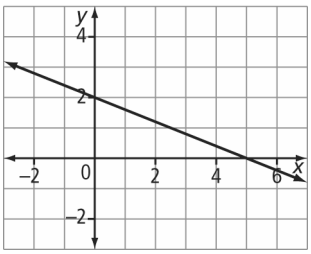
4. Which equation represents a linear relation that has an infinite number of intercepts?

A $y = x$ **B** $y = 2$

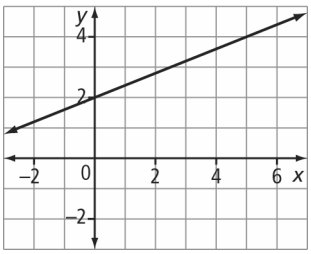
C $y = 0$ **D** $y = x - 1$

5. Which graph shows a line with a slope of $-\frac{2}{5}$ and a y-intercept of 2?

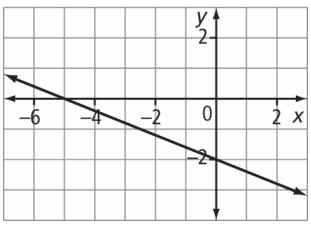
A



B



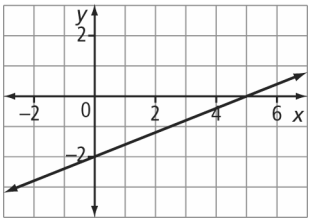
C



Name: _____ Date: _____

BLM 7–11
(continued)

D



Short Answer

Complete the statements in #6 to #8.

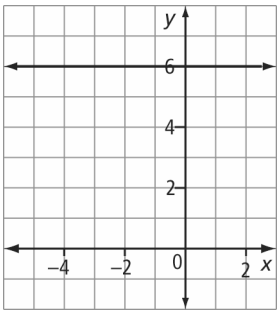
6. The x-intercept of the graph of $5x - 3y - 15 = 0$ is ☐.

7. The slope of the graph of the relation $x = \frac{1}{5}y + 2$ is ☐.

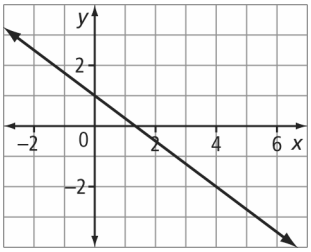
8. The y-intercept of the graph of the line $y - 3 = \frac{1}{2}(x + 10)$ is ☐.

9. Identify the slope and y-intercept of each line.

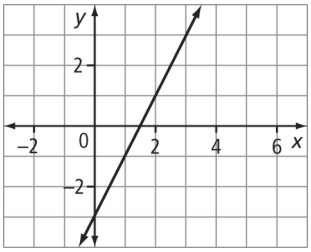
a)



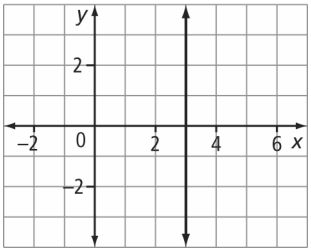
b)



c)



d)



10. Identify the slope of a line parallel to each given line.

a) $y = \frac{11}{3}x + 9$

b) $4x + 6y = 20$

11. Identify the slope of a line perpendicular to each given line.

a) $y = 2x - 4$

b) $3x + 5y = 35$

Extended Response

12. A hot-air balloon is rising at a constant rate of 0.75 m/s. The equation that represents the height of the balloon, h, in metres, as a function of time, t, in seconds, is $h = 0.75t + 3$.

a) What does the h-intercept of the graph of the relation represent?

b) State a suitable domain for this situation. Explain what the domain means.

c) How high will the balloon be after 20 s?

d) How long will it take the balloon to reach a height of 15 m?