Chapter 4 **REVIEW – Concepts #5, 6 and 7**
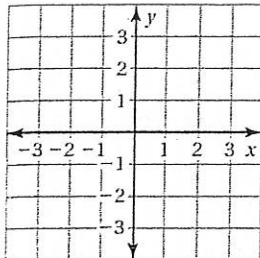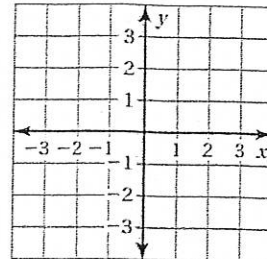
Solve for y. Then graph the equation. Show all work.

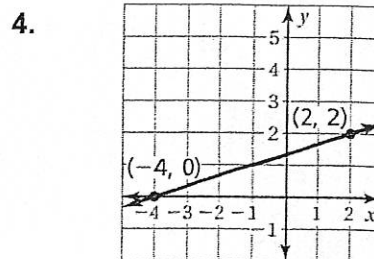1. $3x + 2y = -4$

2. $4y - 3x = 4$

Find the slope of the line.

3.

(5, 2)

(3, −2)

4.

(2, 2)

(−4, 0)
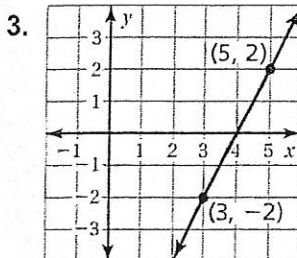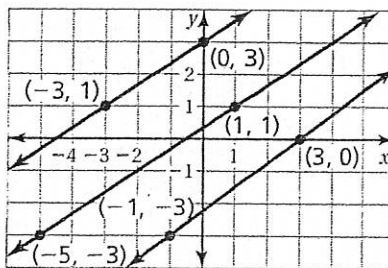
5. Which is steeper, a hill that rises 2 feet for every 10 feet of run, or a hill that rises 2 feet for every 15 feet of run? Explain.

6. Which two lines are parallel? Explain.

(0, 3)

(−3, 1)

(1, 1)

(3, 0)

(−1, −3)

(−5, −3)

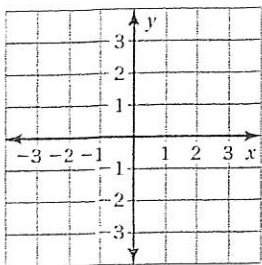**Find the slope and the y-intercept of the graph of the linear equation. Show all work.**

7. $y = -2x - 1$

8. $y - \dfrac{1}{3}x = 0$

9. $y + 2 = \dfrac{3}{4}x$
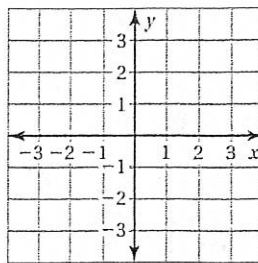
Graph each equation. Show work.

11. $3x - 2y = 6$

12. $2x - y = -2$

13. You open a savings account with $200. You plan to save $20 each week.

   a. Write an equation that represents the amount in the account y after x weeks.

   b. Identify the slope. What does it represent?

   c. Identify the y-intercept. What does it represent?

Find the slope of the line that passes through the given points. Show work.

14. $(-3, -2), (0, 0)$

15. $(0, 3), (2, 3)$

18. The graph shows the relationship between temperature y (in degrees Fahrenheit) and altitude x (in thousands feet).

   a. Find and interpret the slope of the graph.

   b. Write an equation of the line.

   c. Interpret the y-intercept of the graph.

Altitude (thousands of feet)

   d. Interpret the x=intercept of the graph.

   e. What is the temperature at 11,000 feet?