CHAPTER 3

Mid-Chapter Quiz

Lessons 3-1 through 3-3

Math Online glencoe.com
Math *in Motion*, Animation

Determine whether each equation is a linear equation. Write *yes* or *no*. If yes, write the equation in standard form. (Lesson 3-1)

1. $y = -4x + 3$
2. $x^2 + 3y = 8$
3. $\frac{1}{4}x - \frac{3}{4}y = -1$

Graph each equation using the x- and y-intercepts. (Lesson 3-1)

4. $y = 3x - 6$
5. $2x + 5y = 10$

Graph each equation by making a table. (Lesson 3-1)

6. $y = -2x$
7. $x = 8 - y$
8. **BOOK SALES** The equation $5x + 12y = 240$ describes the total amount of money collected when selling x paperback books at \$5 per book and y hardback books at \$12 per book. Graph the equation using the x- and y-intercepts. (Lesson 3-1)

Find the root of each equation. (Lesson 3-2)

9. $x + 8 = 0$
10. $4x - 24 = 0$
11. $18 + 8x = 0$
12. $\frac{3}{5}x - \frac{1}{2} = 0$

Solve each equation by graphing. (Lesson 3-2)

13. $-5x + 35 = 0$
14. $14x - 84 = 0$
15. $118 + 11x = -3$
16. **MULTIPLE CHOICE** The function $y = -15 + 3x$ represents the outside temperature, in degrees Fahrenheit, in a small Alaskan town where x represents the number of hours after midnight. The function is accurate for x values representing midnight through 4:00 P.M. Find the zero of this function. (Lesson 3-2)

A 0 C 5

B 3 D −15

17. Find the rate of change represented in the table. (Lesson 3-3)

x	y
1	2
4	6
7	10
10	14

Find the slope of the line that passes through each pair of points. (Lesson 3-3)

18. (2, 6), (4, 12)
19. (1, 5), (3, 8)
20. (−3, 4), (2, −6)
21. $\left(\frac{1}{3}, \frac{3}{4}\right), \left(\frac{2}{3}, \frac{1}{4}\right)$
22. **MULTIPLE CHOICE** Find the value of r so the line that passes through the pair of points has the given slope. (Lesson 3-3)

$(-4, 8), (r, 12), m = \frac{4}{3}$

F −4

G −1

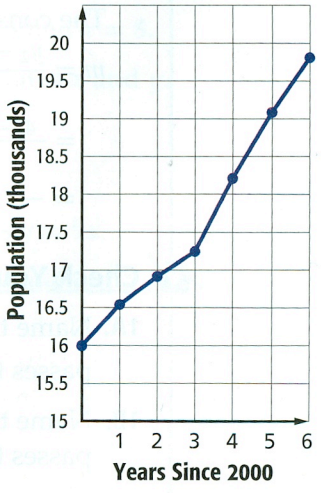
H 0

J 3

23. Find the slope of the line that passes through the pair of points. (Lesson 3-3)

x	y
2.6	−2
3.1	4

24. **POPULATION GROWTH** The graph shows the population growth in Leesburg, Florida, since 2000. (Lesson 3-3)



a. For which time period is the rate of change the greatest?

b. Explain the meaning of the slope from 2000 to 2006.