EXTRA PRACTICE

Chapter 5

5.1 **Write an equation of the line with the given slope and *y*-intercept.**

1. slope: 3
y-intercept: 6

2. slope: -2
y-intercept: 4

3. slope: 5
y-intercept: -1

4. slope: -1
y-intercept: -3

5. slope: $\frac{1}{2}$
y-intercept: -5

6. slope: $-\frac{7}{10}$
y-intercept: 8

5.2 **Write an equation of the line that passes through the given point and has the given slope *m*.**

7. $(3, 8)$; $m = 2$

8. $(-1, 5)$; $m = -4$

9. $(-6, 3)$; $m = \frac{2}{3}$

5.2 **Write an equation of the line that passes through the given points.**

10. $(2, 4)$, $(5, 13)$

11. $(1, -2)$, $(-2, 13)$

12. $\left(2, \frac{1}{3}\right)$, $(6, 3)$

5.3 **Graph the equation.**

13. $y - 3 = -3(x + 4)$

14. $y + 5 = -2(x - 1)$

15. $y - 6 = \frac{2}{3}(x - 3)$

5.3 **Write an equation in point-slope form of the line that passes through the given points.**

16. $(-4, 2)$, $(-2, 16)$

17. $(3, 9)$, $(-7, 4)$

18. $(10, -2)$, $(12, -6)$

5.4 **Write an equation in standard form of the line that passes through the given point and has the given slope *m* or that passes through the two given points.**

19. $(2, 7)$, $m = -4$

20. $(5, 11)$, $m = 3$

21. $(1, -2)$, $(-2, 4)$

5.5 **Write an equation of the line that passes through the given point and is parallel to the given line.**

22. $(5, 4)$, $y = 3x + 5$

23. $(-3, -7)$, $y = -5x - 2$

24. $(8, -3)$, $y = \frac{3}{4}x + 5$

5.5 **Write an equation of the line that passes through the given point and is perpendicular to the given line.**

25. $(-12, -2)$, $y = 3x + 2$

26. $(15, -11)$, $y = \frac{3}{5}x - 8$

27. $(7, -6)$, $4x + 6y = 7$

5.6 **Make a scatter plot of the data in the table. Draw a line of fit. Write an equation of the line.**

28.

x	1	2	3	3.5	4	4.5	5
y	20	35	40	55	60	45	60

29.

x	10	20	30	40	50	60
y	55	45	45	40	35	20

5.7 **Make a scatter plot of the data. Find the equation of the best-fitting line. Approximate the value of *y* for $x = 7$.**

30.

x	0	2	4	6	8
y	0.5	3	4	5.5	7

31.

x	0	1	3	6	8
y	5	8	12	15	14