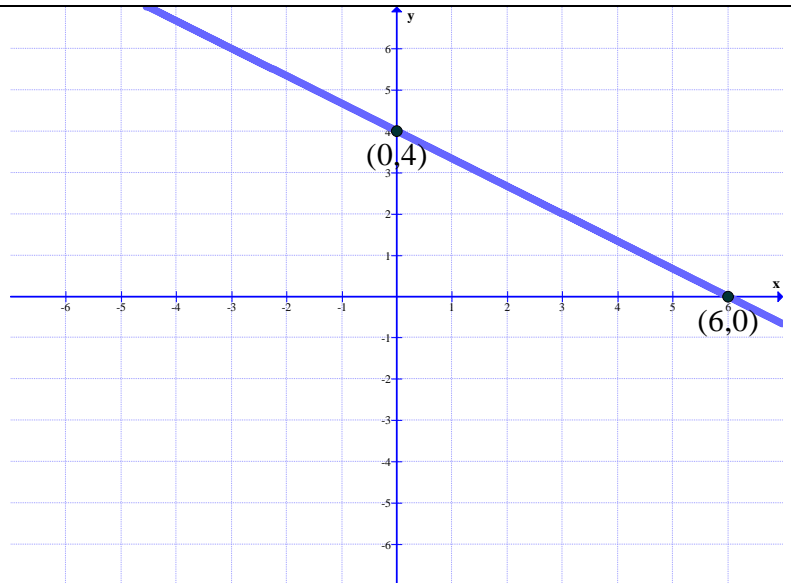


# Answers to Odd Problems

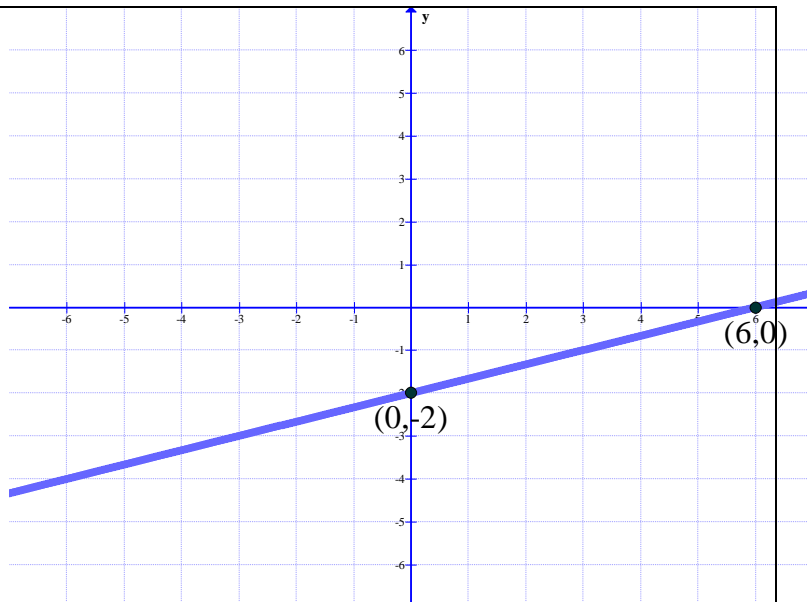
## Chapter 3

### Section 3.1

- 1) x- intercept (6,0)  
y- intercept (0,4)



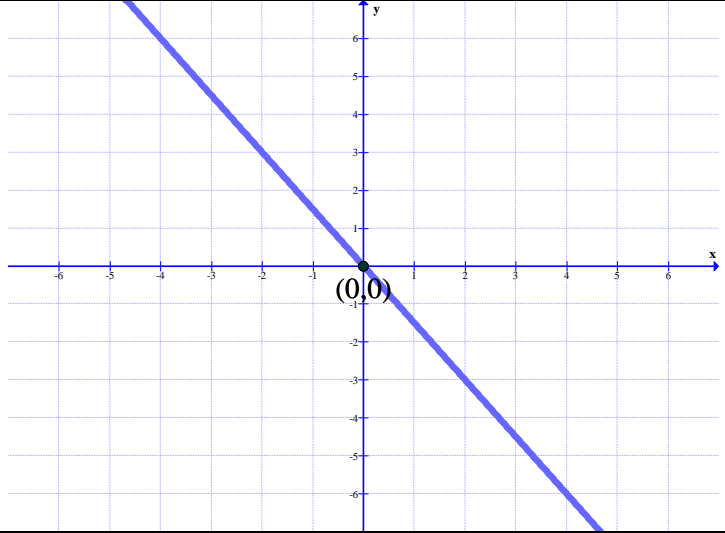
- 3) x- intercept (6,0)  
y-intercept (0, -2)



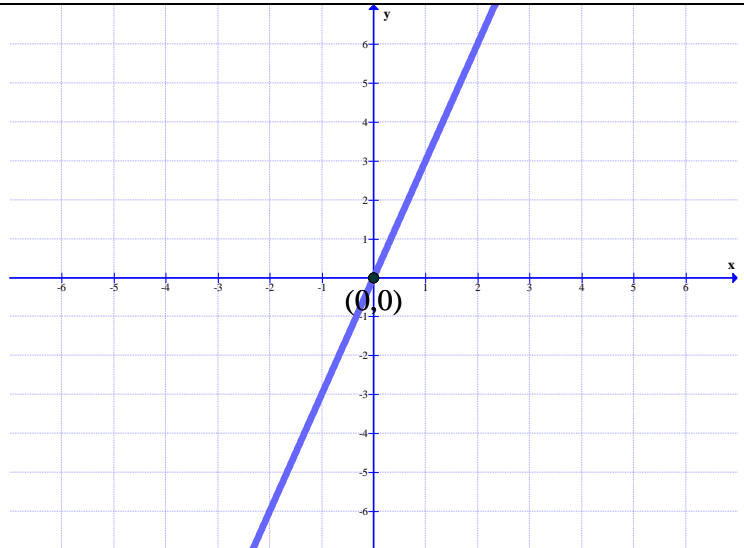
# Answers to Odd Problems

## Section 3.1

5) x - intercept (0,0)  
y-intercept (0,0)



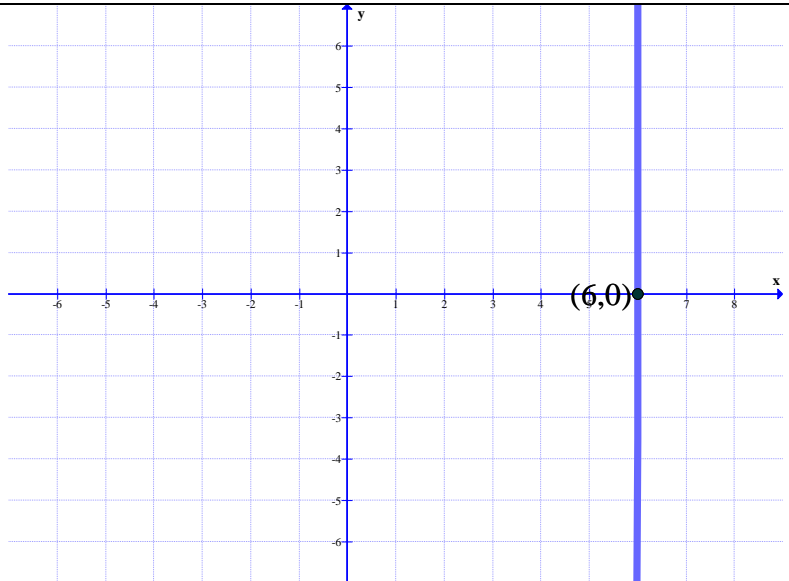
7) x - intercept (0,0)  
y-intercept (0,0)



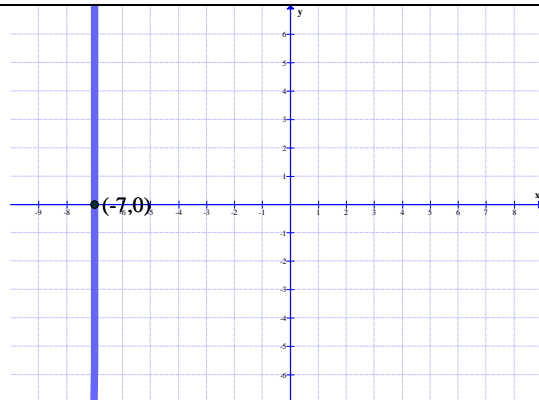
# Answers to Odd Problems

## Section 3.1

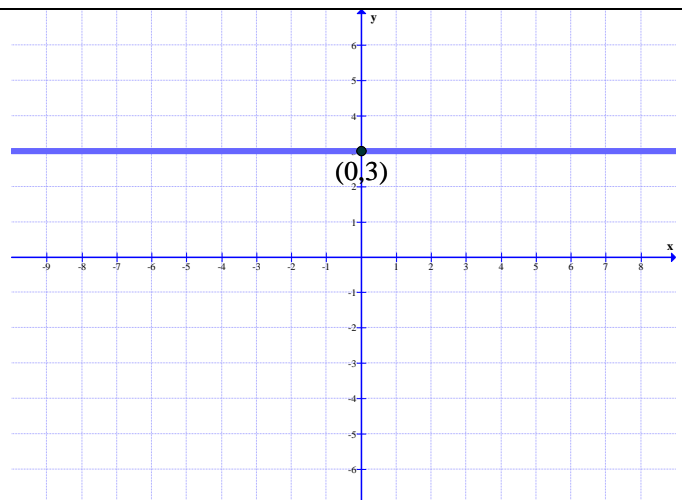
9) x-intercept (6,0)  
y-intercept none



11) x-intercept (-7,0)  
y-intercept none



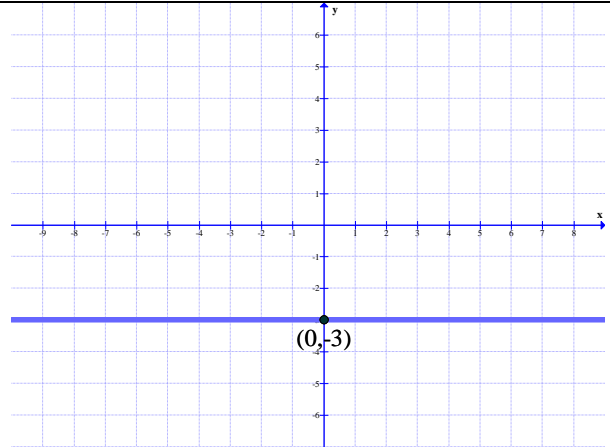
13) x-intercept none  
y-intercept (0,3)



# Answers to Odd Problems

## Section 3.1

15) x-intercept none  
y-intercept (0,-3)



17) Slope intercept form  $y = -2x + 10$

Slope = (-2) y-intercept (0,10)

19) Slope intercept form  $y = x - 1$

Slope = 1 y-intercept (0,-1)

21) Slope intercept form  $y = -\frac{1}{2}x + 4$

Slope =  $(-\frac{1}{2})$  y-intercept (0,4)

23) Slope intercept form  $y = \frac{1}{2}x$

Slope =  $\frac{1}{2}$  y-intercept (0,0)

25) Slope intercept form  $y = -\frac{3}{2}x + \frac{5}{2}$

Slope =  $(-\frac{3}{2})$  y-intercept  $(0, \frac{5}{2})$

27) Slope intercept form  $y = -\frac{5}{6}x + 10$

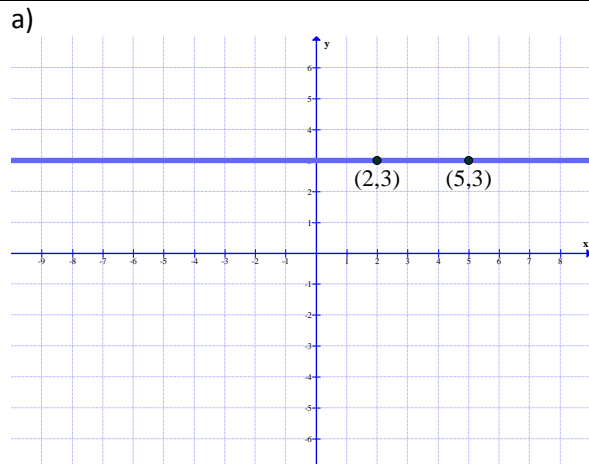
Slope =  $-\frac{5}{6}$  y-intercept (0, 10)

29) Slope =  $\frac{1}{2}$

31) slope =  $\frac{1}{7}$

33) Slope =  $\frac{1}{6}$

35)



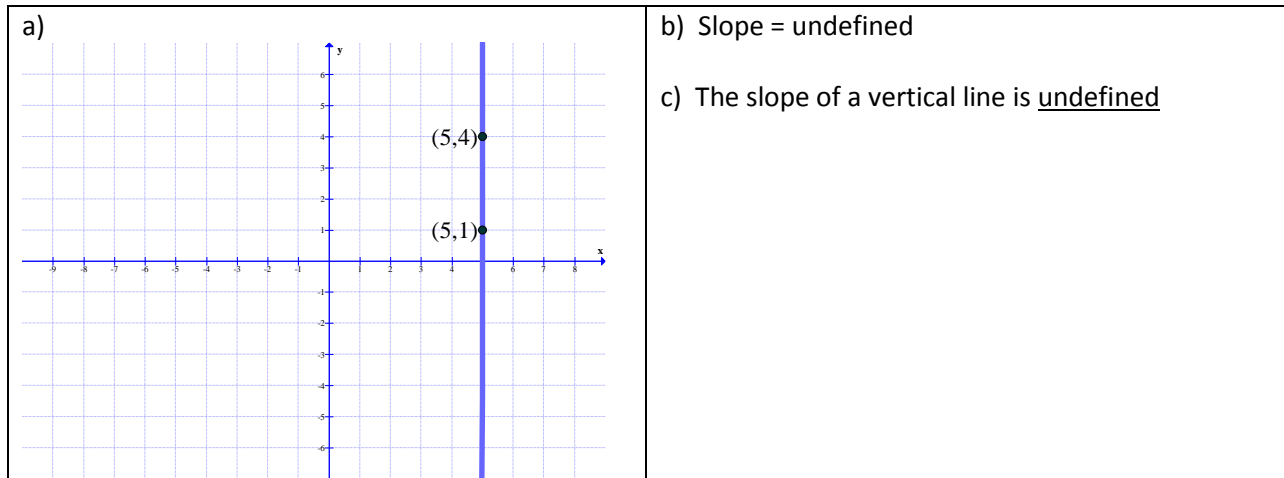
b) Slope = 0

c) The slope of a horizontal line is zero

## Answers to Odd Problems

### Section 3.1

37)



39a)  $y = 3$

41a)  $x = 1$

43)  $y = -3x + 21$

49)  $y = -4x + 21$

55)  $y = 4$

39b)  $y = 1$

41b)  $x = 0$

45)  $y = \frac{2}{3}x + \frac{19}{3}$

51)  $y = -\frac{8}{3}x + \frac{43}{3}$

57)  $x = 1$

39c)  $y = 3$

41c)  $x = -2$

47)  $y = 5$

53)  $x = 1$

59)  $y = 2$

### Section 3.2

1) Relation written as a set of ordered pairs: { (Atlanta, Falcons) (Phoenix, Cardinals) (Detroit, Lions)}

Domain { Atlanta, Phoenix, Detroit} Range {Falcons, Cardinals, Lions}

3) Relation written as a set of ordered pairs: { (3,1) (4,1) (5,3) (6,5) (7,8)}

Domain {3,4,5,6,7} Range {1,3,5,8}

5) Domain {-5, -3, 1} Range {-4, 0, 12}

9) Domain [-1, 2] Range [-2, 4]

13) Domain  $(-\infty, 2]$  Range  $(-\infty, 0]$

17) Domain {-3} or [-3,-3] Range  $(-\infty, \infty)$

7) Domain [0,5] Range [1,10]

11) Domain  $(-\infty, \infty)$  Range [1,  $\infty$ )

15) Domain  $(-\infty, \infty)$  Range  $(-\infty, 1]$

### Section 3.3

1) yes (y is a function of x)

7) no

13)  $f(3)=13$

3) yes (y is a function of x)

9) yes

15)  $g(1)=12$

5) no (y is not a function of x)

11) no

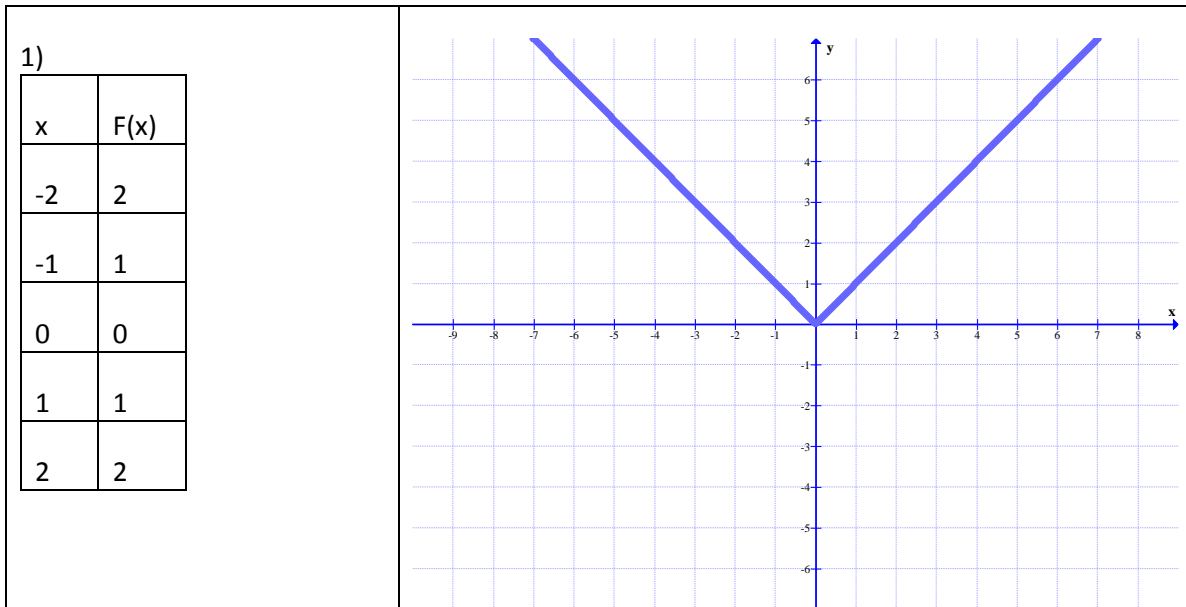
17)  $h(2)=4$

# Answers to Odd Problems

## Section 3.3

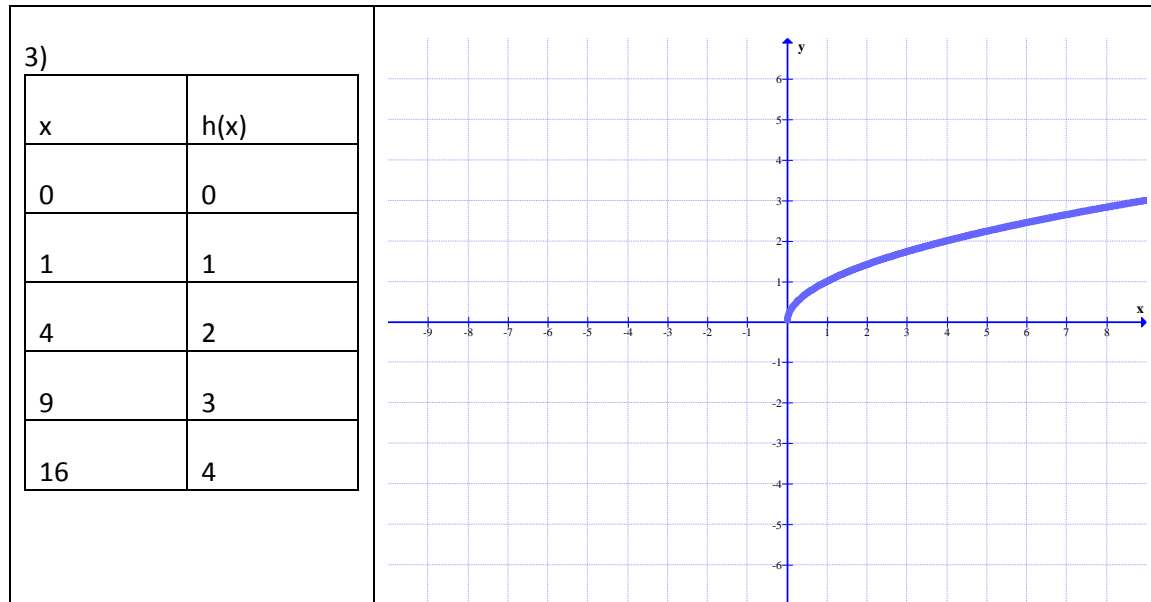
- 19)  $k(-5) = 125$                       21)  $f(b) = 3b + 4$                       23)  $f(b+1) = 3b+7$   
 25)  $g(2a) = 4a^2 + 10a + 6$                       27)  $g(x-2) = x^2 + x$                       29)  $k(a) = 5a^2$   
 31) Domain of  $f = \{1,2,3,9\}$                       33) range of  $f = \{2,3,5\}$                       35)  $x = 2,9$   
 37)  $x = 1,4$                       39)  $f(3) = 5$                       41)  $g(6) = 4$   
 43) Domain =  $(-\infty, 3) \cup (3, \infty)$                       45) Domain =  $(-\infty, 0) \cup (0, \infty)$   
 47) Domain =  $(-\infty, 3) \cup (3, \infty)$                       49) Domain =  $(-\infty, \infty)$   
 51) Domain =  $(-\infty, \infty)$                       53) Domain =  $(-\infty, \infty)$   
 55a) x-intercept (1,0) and (5,0)                      b) y-intercept (0,5)                      c)  $x = 0$  and  $x = 6$                       d)  $f(5) = 0$   
 57a) x-intercept (-4,0) and (2,0)                      b) y-intercept (0,8)                      c)  $x = 4$  and  $x = 2$                       d)  $h(0) = 8$

## Section 3.4



# Answers to Odd Problems

## Section 3.4



5) x-intercept (3,0) y-intercept (0,-6)

7) x-intercept (0,0) y-intercept (0,0)

9) x-intercepts  $(\frac{2}{3}, 0), (-1, 0)$  y-intercept (0,-2)

11) x-intercepts (-6,0), (1,0) y-intercept (0,-6)

13) x-intercepts (0,0), (3,0), (4,0) y-intercept (0,0)

15) x-intercepts (0,0), (-5,0), (1,0) y-intercept (0,0)

17) x-intercept (-3,0) y-intercept (0,6)

19) x-intercepts (-4, 0), (1,0) y-intercept (0,-4)

## Section 3.5

1)  $W = kx^2$

3)  $Y = \frac{k}{x^3}$

5)  $Q = \frac{k}{\sqrt{x}}$

7)  $M = kx^2y^3$

9)  $k = 5$

11)  $k = 50$

13)  $k = 7$

15)  $y = 375$

17)  $W = \frac{50}{3}$

19)  $Y = 192$

21) 8 days

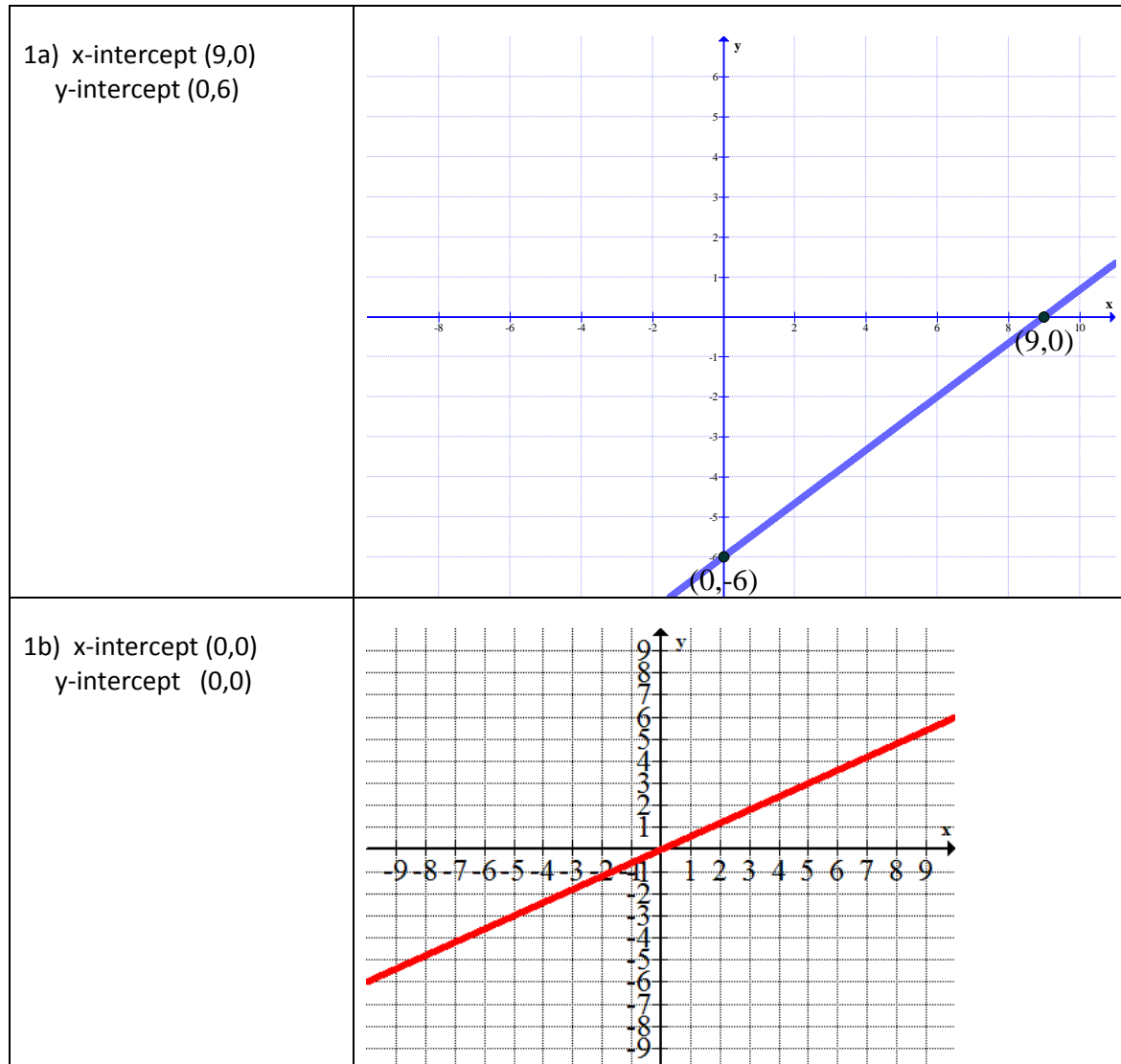
23) 72 feet

25) 800 feet

27) \$200

# Answers to Odd Problems

## Chapter 3 Review



2) Slope intercept form of line:  $y = \frac{1}{2}x - 6$  Slope  $\frac{1}{2}$  y-intercept (0,-6)

3a)  $y = \frac{2}{5}x + \frac{12}{5}$

3b)  $y = -\frac{3}{5}$

3c)  $y = -3x + 11$

4a) domain = [-1,4] range = [-4, 5]

4b) domain = [3,  $\infty$ ) range = [0,  $\infty$ )

4c) domain = {-3, 3, 7} range = {0,2,4}

5a)  $f(-1) = 0$

5b)  $x = 4$

5c) x-intercept (-1,0) and (3,0)  
y-intercept (0,-3)

6a)  $f(-3) = -5$

6b)  $h(4) = 5$

6c)  $g(-2) = 1$

6d)  $g(x+2) = x^2 + 4x + 1$

7a) domain {1,4,-6,-2}

7b) range {-1,-2,1}



## Answers to Odd Problems

### Chapter 3 Review

7c)  $x = -2$

7d)  $f(x) = -2$

8a) domain  $(-\infty, 3) \cup (3, \infty)$

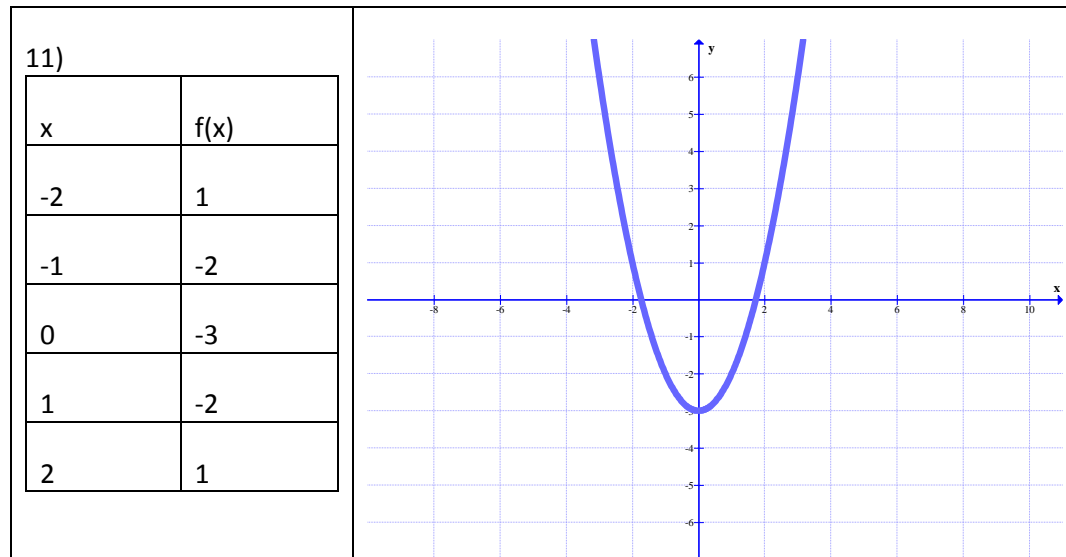
8b)  $(-\infty, -3) \cup (-3, 1) \cup (1, \infty)$

9a)  $(-\infty, \infty)$

9b)  $(-\infty, \infty)$

10a) x-intercepts  $(\frac{2}{3}, 0), (-2, 0)$  y-intercept  $(0, -4)$

10b) x-intercepts  $(0, 0), (3, 0), (-1, 0)$  y-intercept  $(0, 0)$



12a)  $P=kx^2$

12b)  $T=kxw^2$

13a)  $k = -6$

13b)  $k = 24$

14) \$9,000

15) \$375