

# Answer Key

## Lesson 1-2

$$7. \begin{aligned} 2(12 - 4 \cdot 3) & \\ = 2(12 - 12) & \quad \text{Substitution (=)} \\ = 2(0) & \quad \text{Substitution (=)} \\ = 0 & \quad \text{Multiplicative} \\ & \quad \text{Property of Zero} \end{aligned}$$

$$8. \begin{aligned} 4 + (7 - 21 \div 3) & \\ = 4 + (7 - 7) & \quad \text{Substitution (=)} \\ = 4 + 0 & \quad \text{Substitution (=)} \\ = 4 & \quad \text{Additive Identity} \end{aligned}$$

$$9. \begin{aligned} 3(2 + 1) \div 9 \cdot 5 & \\ = 3(3) \div 9 \cdot 5 & \quad \text{Substitution (=)} \\ = 9 \div 9 \cdot 5 & \quad \text{Substitution (=)} \\ = 1 \cdot 5 & \quad \text{Substitution (=)} \\ = 5 & \quad \text{Multiplicative} \\ & \quad \text{Identity} \end{aligned}$$

## Lesson 1-3

$$4. \begin{aligned} 9 + n + 3 = 9 + 3 + n & \quad \text{Commutative (+)} \\ = (9 + 3) + n & \quad \text{Associative (+)} \\ = 12 + n & \quad \text{Substitution (=)} \end{aligned}$$

$$5. \begin{aligned} 12 \cdot t \cdot 4 = 12 \cdot 4 \cdot t & \quad \text{Commutative (}\times\text{)} \\ = (12 \cdot 4) \cdot t & \quad \text{Associative (}\times\text{)} \\ = 48t & \quad \text{Substitution (=)} \end{aligned}$$

$$6. \begin{aligned} 11 \cdot (8g) = (11 \cdot 8) \cdot g & \quad \text{Associative (}\times\text{)} \\ = 88g & \quad \text{Substitution (=)} \end{aligned}$$

$$7. \begin{aligned} (k + 18) + 1 = k + (18 + 1) & \quad \text{Associative (+)} \\ = k + 19 & \quad \text{Substitution (=)} \end{aligned}$$

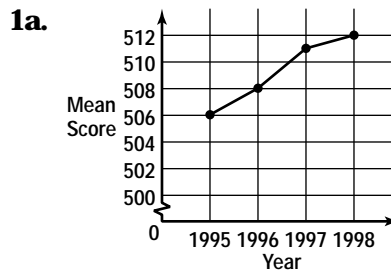
$$8. \begin{aligned} 2p + (6 + p) = 2p + (p + 6) & \quad \text{Commutative (+)} \\ = (2p + p) + 6 & \quad \text{Associative (+)} \\ = 3p + 6 & \quad \text{Substitution (=)} \end{aligned}$$

$$9. \begin{aligned} (7 \cdot 4) \cdot 25 = 7 \cdot (4 \cdot 25) & \quad \text{Associative (}\times\text{)} \\ = 7 \cdot 100 & \quad \text{Substitution (=)} \\ = 700 & \quad \text{Substitution (=)} \end{aligned}$$

## Lesson 1-6

Number of Pets	Tally	Frequency
0		5
1		5
2		6
3		5
4		2
5		1

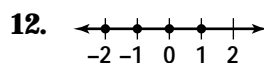
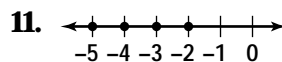
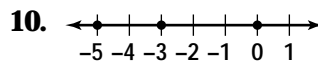
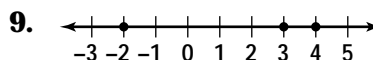
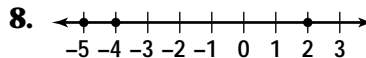
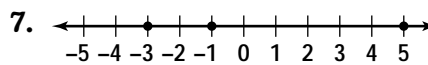
## Lesson 1-7



## Chapter 1 Review

- $5 \cdot 1 + 6 \div 2 = 8$
- $3 \cdot (8 + 2) = 30$
- $9 \div (5 - 8 \div 4) = 3$
- $2x + 7x + 6y + 8x = 17x + 6y$
- $5(n + 1) + 3(n + 6) = 8n + 23$
- $6 + 5 = 5 + 6$ ; Commutative Property (+)

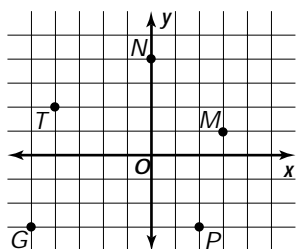
## Lesson 2-1



# Answer Key

## Lesson 2-2

10-14.



## Chapter 2 Review

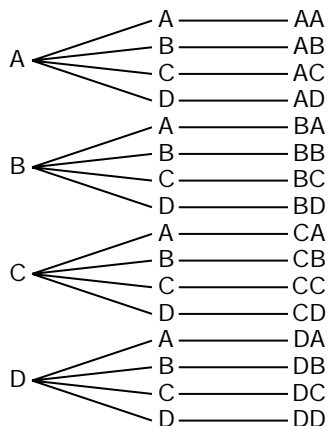
- 1a.  $1^{\circ}\text{C}$  1b.  $5^{\circ}\text{C}$  1c.  $-7^{\circ}\text{C}$  1d.  $3^{\circ}\text{C}$   
 1e.  $-2^{\circ}\text{C}$  1f.  $21^{\circ}\text{C}$  2. Berlin:  $34^{\circ}\text{F}$ ; London:  $42^{\circ}\text{F}$ ; Montreal:  $18^{\circ}\text{F}$ ; Paris:  $38^{\circ}\text{F}$ ; Beijing:  $28^{\circ}\text{F}$ ; Sao Paulo:  $74^{\circ}\text{F}$  3. Sao Paulo, Brazil, is in the southern hemisphere, and December is summertime in the southern hemisphere.  
 4. Answers will vary.

## Chapter 3 Review

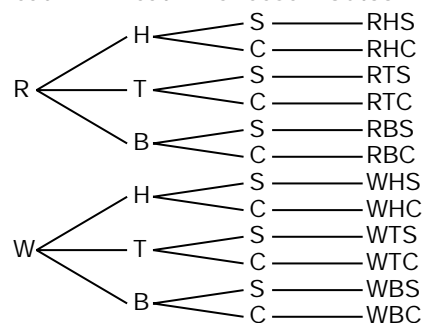
1. -3 2. 5 3. -12 4. 6 5. 7 6. -30  
 7. -7 8. 31 9. -9 10. 4 11. 8  
 Solution to puzzle: algebra is fun

## Lesson 4-2

1. 16; Question 1 Question 2 Outcomes



2. 12; Bread Meat Cheese Outcomes



## Chapter 4 Review

1. 4 2. 4 3. -11 4. -10 5. 1 6. -3  
 7. 21 8. 6 9. 2

There are 900 lockers. The locker is located on floor 2, next to room 6, and is number 21.

## Chapter 5 Review

Answers will vary depending on the number of children and adults that students observe. The following are sample answers.

	Location 1	Location 2	Location 3
Children	32	18	24
Adults	48	14	51
Total	80	32	75
Ratio of children to total	$\frac{2}{5}$	$\frac{9}{16}$	$\frac{8}{25}$
Ratio of adults to total	$\frac{3}{5}$	$\frac{7}{16}$	$\frac{17}{25}$

	Location 1	Location 2	Location 3
Number of children out of 50	20	28	16
Number of adults out of 50	30	22	34

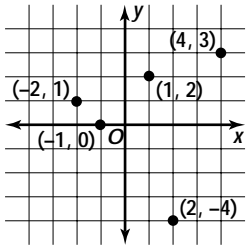
3. In the community, about 40% of the people are children and 60% are adults.

# Answer Key

## Lesson 6-1

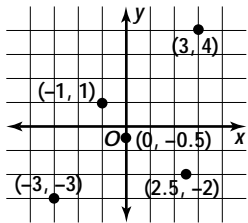
1.

x	y
-2	1
-1	0
1	2
2	-4
4	3



2.

x	y
-3	-3
-1	1
0	-0.5
2.5	-2
3	4



3.

x	y
-4	-4
-3	2
-1	-2
2	-1

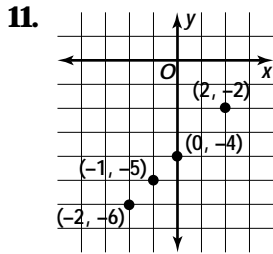
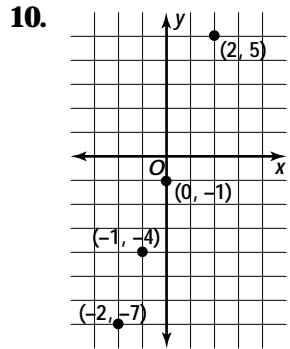
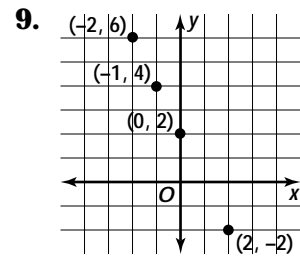
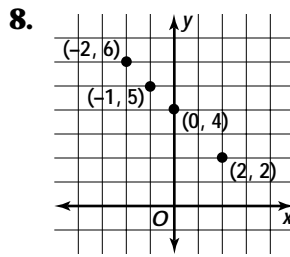
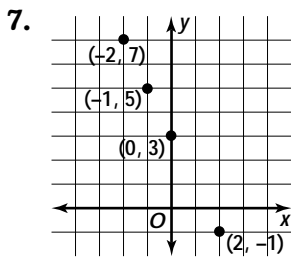
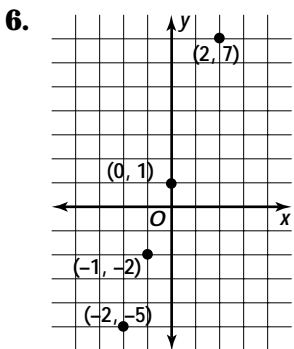
4.

x	y
-1	2
1	-2
2	2
3	-3

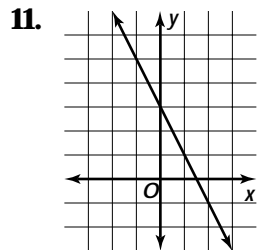
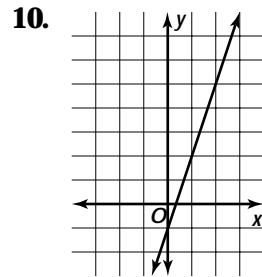
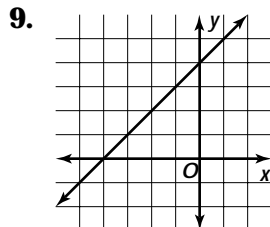
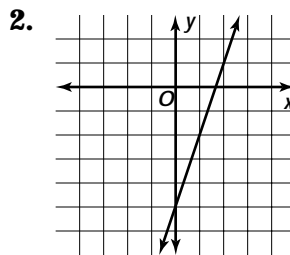
5.

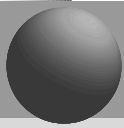
x	y
-3	-2
-3	1
-1	2
0	-3

## Lesson 6-2

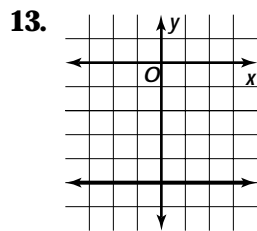
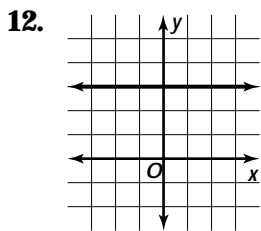


## Lesson 6-3

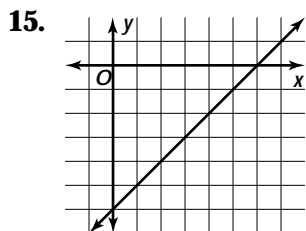
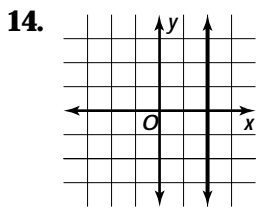
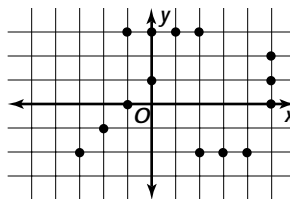




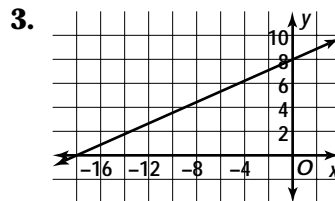
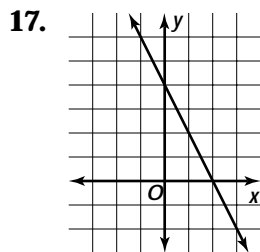
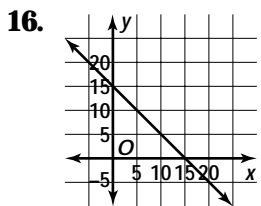
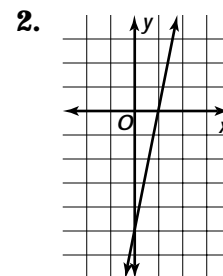
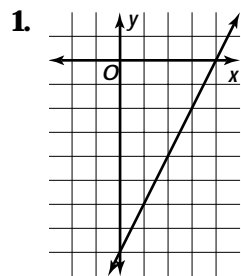
# Answer Key



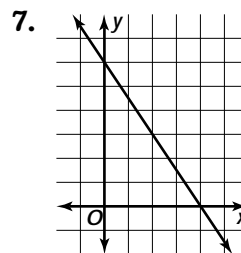
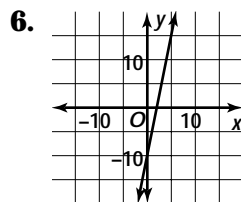
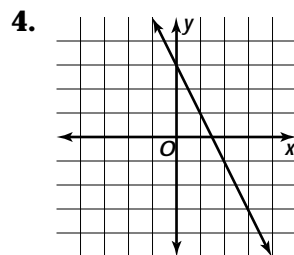
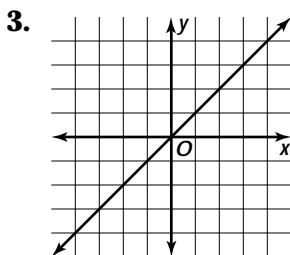
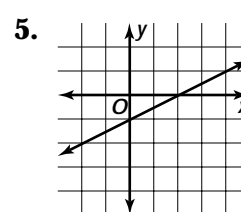
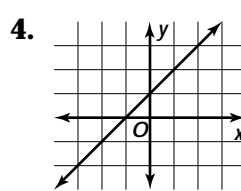
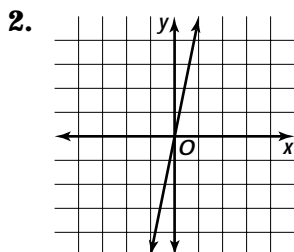
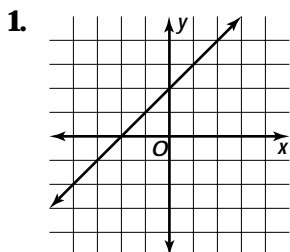
Clue 5: 4



## Lesson 7-5



## Lesson 6-5



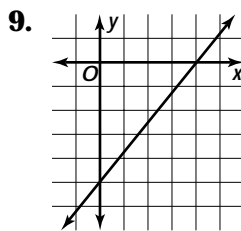
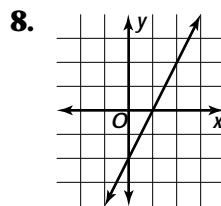
## Chapter 6 Review

Clue 1:  $D = \{0, 5\}$

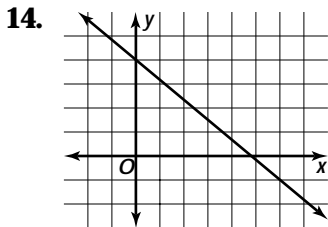
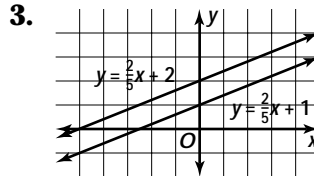
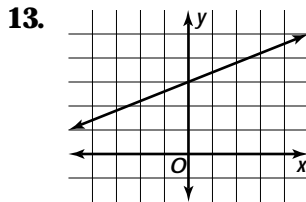
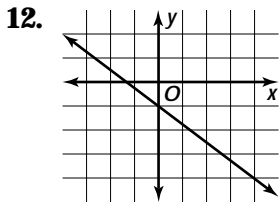
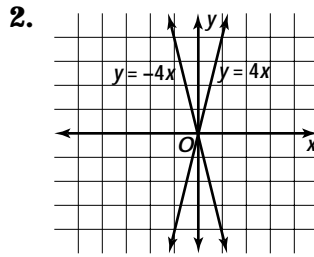
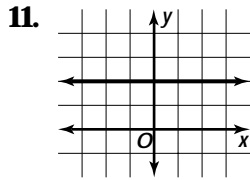
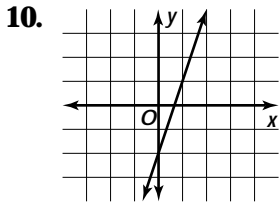
Clue 2:  $R = \{-2, 0\}$

Clue 3: The points are  $(-2, -1)$ ,  $(-1, 0)$ , and  $(2, 3)$ .

Clue 4: no; yes; yes



# Answer Key



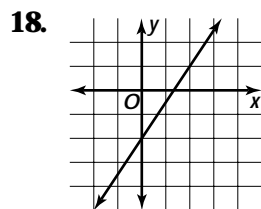
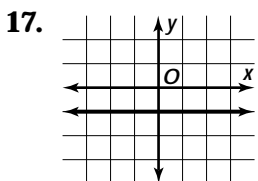
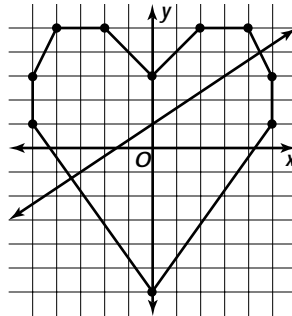
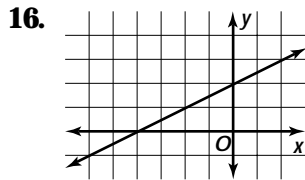
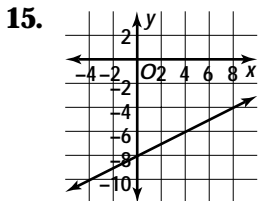
## Chapter 7 Review

1.  $m = -2$  2.  $m = 0$  3. undefined slope

4.  $y = 5$  5.  $x = -5$  6. Sample answer:

$$y - 3 = 2(x + 5) \quad 8. m = -\frac{7}{5}$$

10.  $y = -x + 3$



## Chapter 8 Review

The path through the maze is 1, 11, 8, 12, 5, 7, 15, and 4.

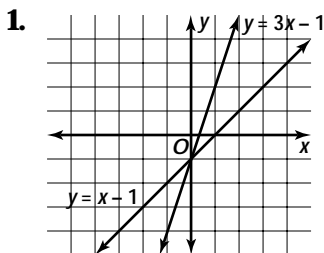
1 (10 mm), 11 ( $6 \times 10^5$ ), 8 (go to 12), 12 (no), 5 ( $2x$ ), 7(100), 15( $3 \times 10^{-15}$ ), and 4.

Answers to other rooms are 2. no 6. yes  
9. false 14. true

## Chapter 9 Review

1.  $x^2 - 2x$  2.  $x^2 - 4x + 4$  3.  $4x^2 - 4x + 4$   
4.  $x^2 - x + 1$  5.  $4x + 5$  6.  $20x^2 + 65x + 50$   
7.  $40x^4 + 130x^3 + 100x^2$  8. 540,000; The number of pennies is 540,000. The charity generated \$5400 dollars.

## Lesson 7-6



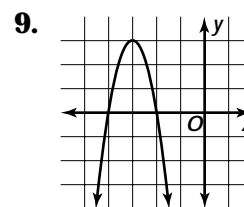
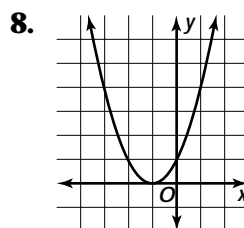
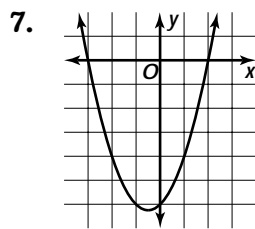
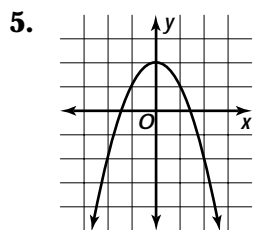
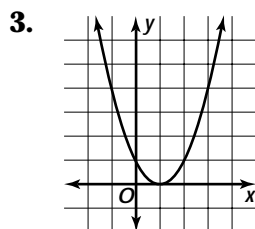
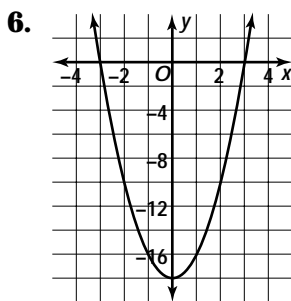
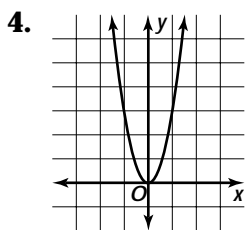
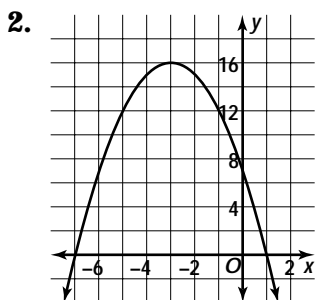
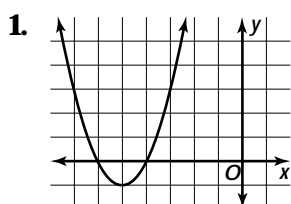
# Answer Key

## Chapter 10 Review

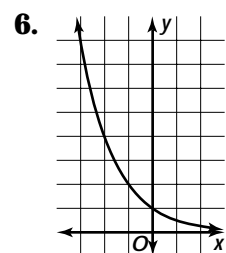
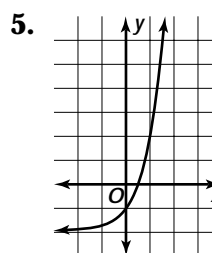
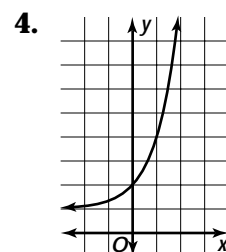
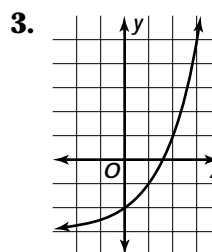
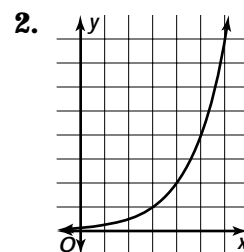
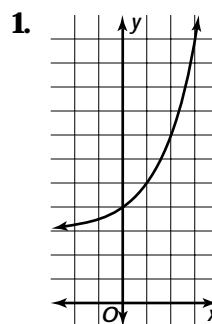
- 1.**  $9x(2 - y)$    **2.**  $2x(2x^2 + 3)$   
**3.**  $(x - 8)(x + 8)$    **4.**  $(x - 4)(x + 4)$   
**5.**  $2(x - 4)(x + 4)$    **6.**  $(x + 2)(x + 4)$   
**7.**  $(x - 4)(x - 2)$    **8.**  $(x - 3)(x + 4)$   
**9.**  $(x - 4)(x + 3)$    **10.**  $2(x + 2)(x - 4)$   
**11.**  $(2x + 1)(x + 4)$    **12.**  $(2x - 1)(x - 4)$

The outdated technology: EIGHT TRACK

## Lesson 11-1

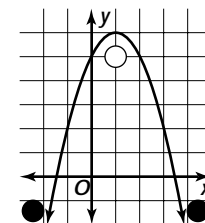


## Lesson 11-7



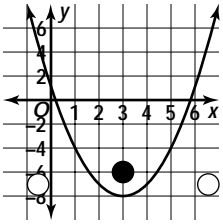
## Chapter 11 Review

Hole 1:  $y = -x^2 + 2x + 5$

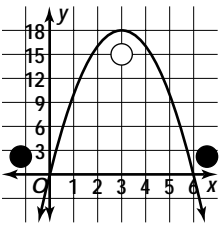


# Answer Key

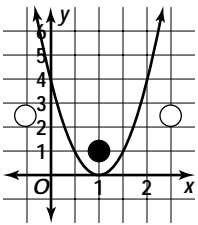
Hole 2:  $y = x^2 - 6x + 1$



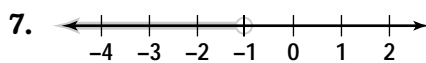
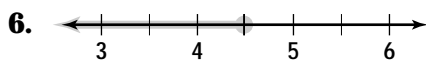
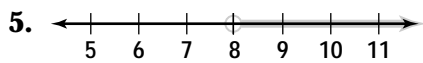
Hole 3:  $y = -2x^2 + 12x$



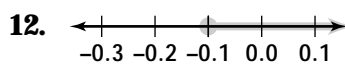
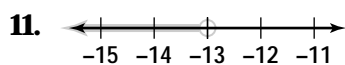
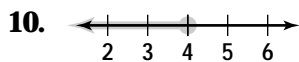
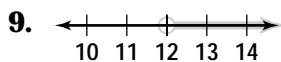
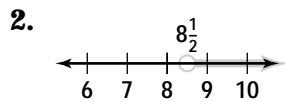
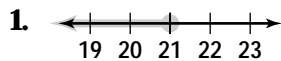
Hole 4:  $y = 4x^2 - 8x + 4$



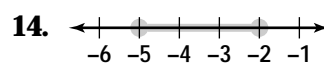
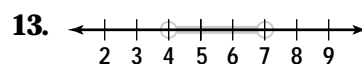
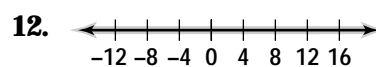
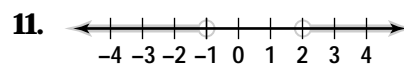
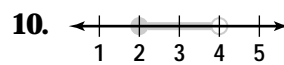
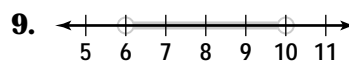
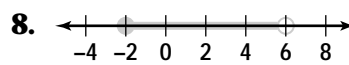
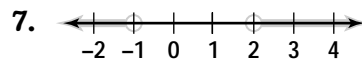
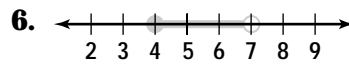
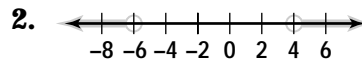
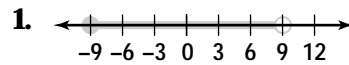
## Lesson 12-1



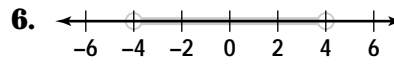
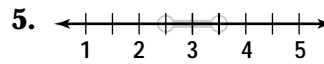
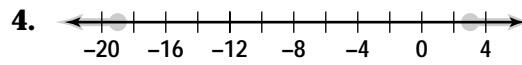
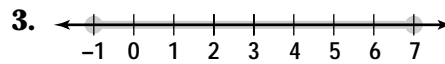
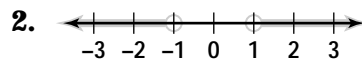
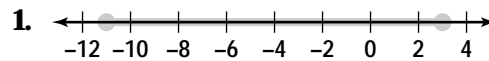
## Lesson 12-2



## Lesson 12-5

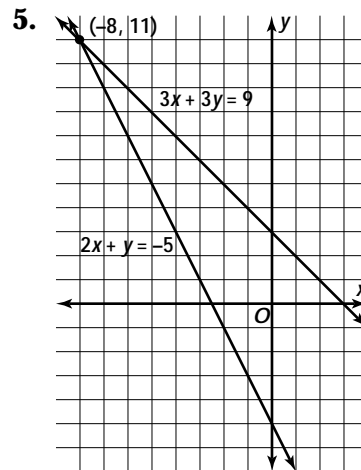
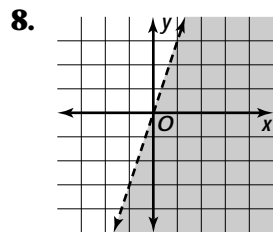
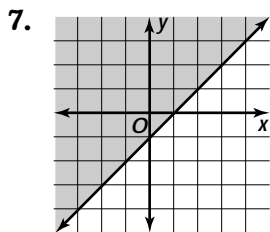
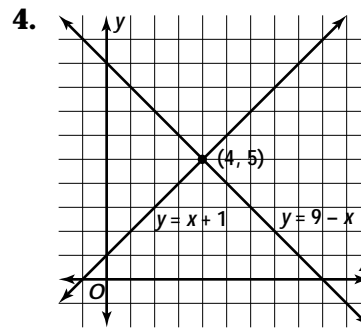
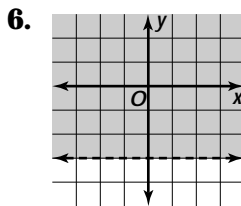
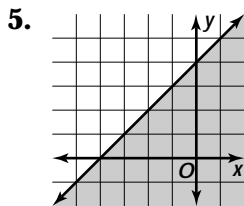
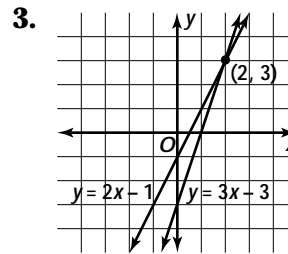
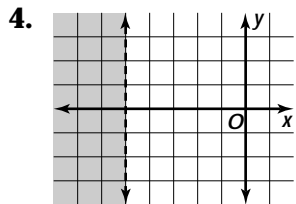
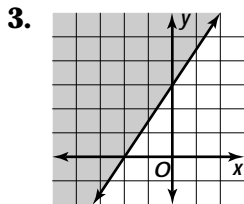
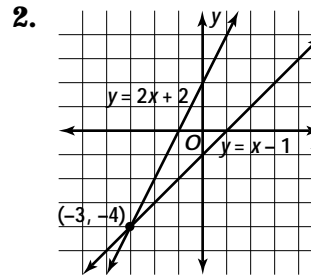
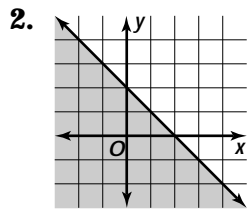
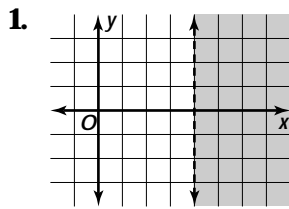


## Lesson 12-6



# Answer Key

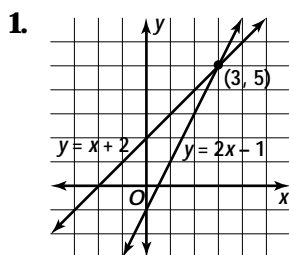
## Lesson 12-7



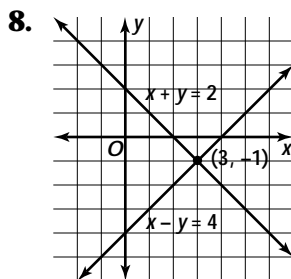
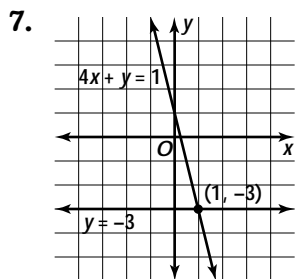
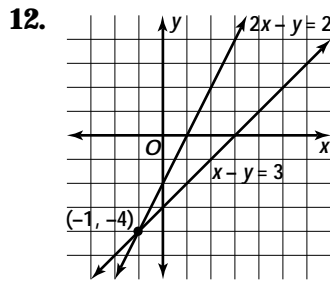
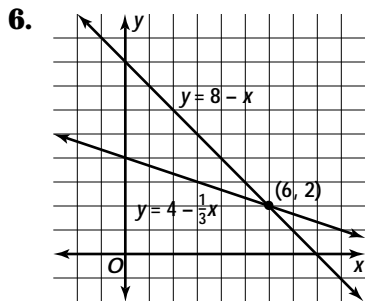
## Chapter 12 Review

1.  $x \leq 4$    2.  $t > 4$    3.  $n < 4$    7.  $w < 5$  and  $w > -3$    9.  $p \geq 5$  or  $p \leq -3$   
 NY YANKEES TICKETS

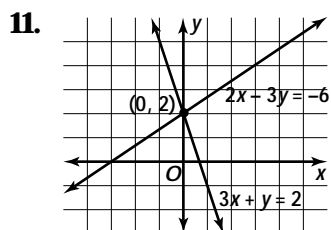
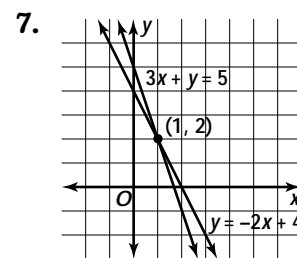
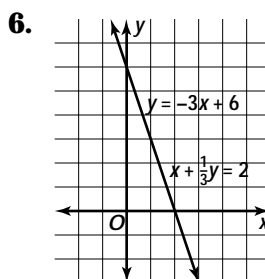
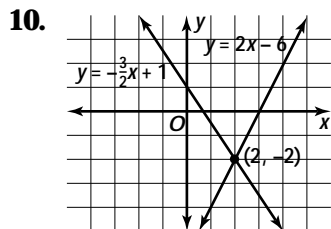
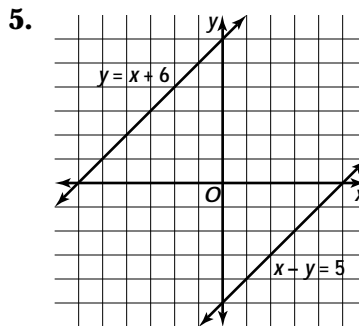
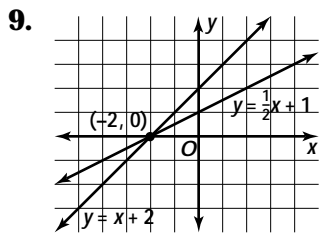
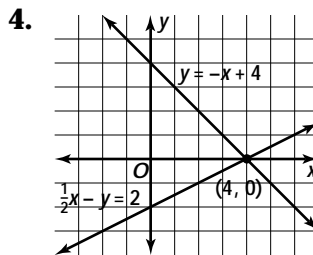
## Lesson 13-1



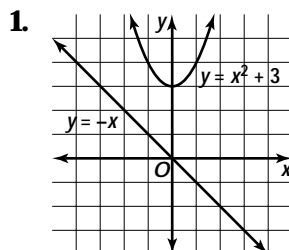
# Answer Key



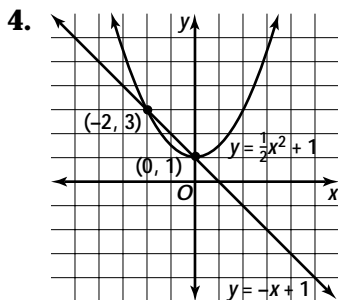
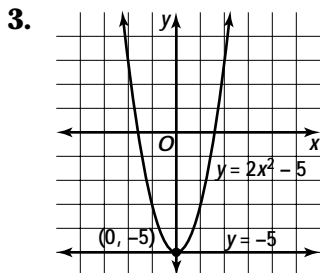
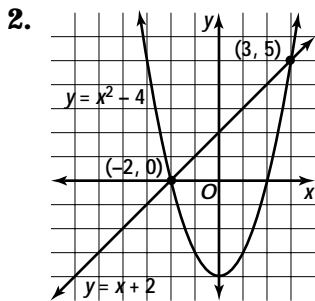
## Lesson 13-2



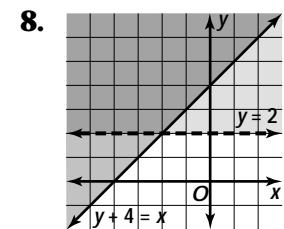
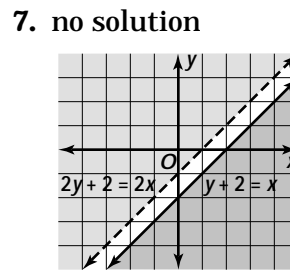
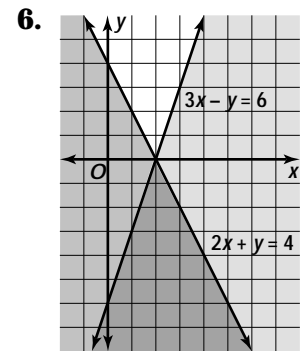
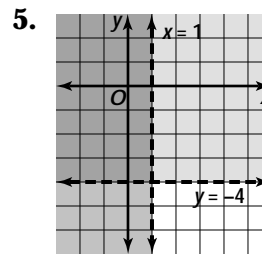
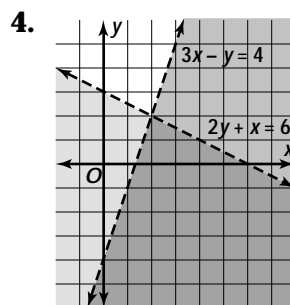
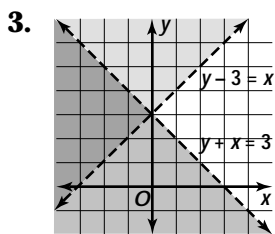
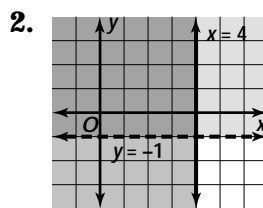
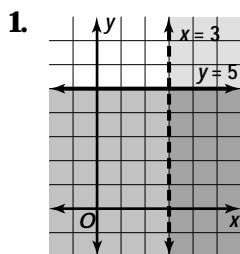
## Lesson 13-6



# Answer Key



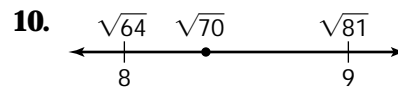
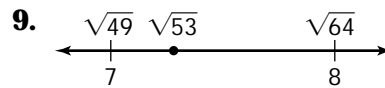
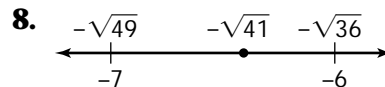
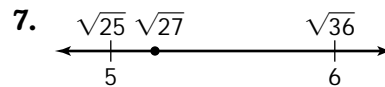
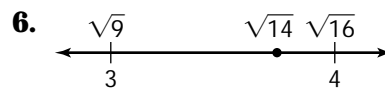
## Lesson 13-7



## Chapter 13 Review

Gold:  $(-2, 4)$ ; Silver:  $(4, -3)$ ; Diamonds: no solution; Jewels:  $(-1, 0)$ ; The gold is nearest to the starting point,  $(0, 5)$ .

## Lesson 14-1



# Answer Key

## Chapter 14 Review

- 1.**  $8$  (X—Leaky Roof)    **2.**  $4|x|\sqrt{5}$   
**3.**  $6b^2|c|\sqrt{2ab}$     **4.**  $3$  (X—Leaky Roof)  
**5.**  $\sqrt{6}$     **6.**  $-3\sqrt{5} + 4\sqrt{7}$   
**7.**  $0$  (X—Leaky Roof)    **8.**  $3 + 2\sqrt{3}$   
**9.**  $-31 - 5\sqrt{5}$     **10.**  $\frac{30 - 5\sqrt{3}}{33}$

## Chapter 15 Review

- 1.**  $\frac{3x}{y}$     **2.**  $\frac{x}{3}$     **3.**  $\frac{x+4}{2(x+2)}$     **4.**  $1$     **5.**  $x^2 + 2x - 1$   
**6.**  $6$     **7.**  $-\frac{8}{35x}$     **8.**  $\frac{2x}{(x+3)(x-3)}$

