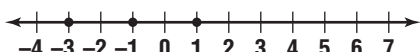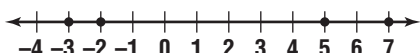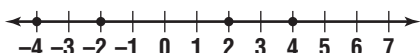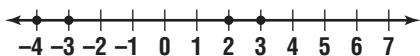# Answer Key

Lesson 1-1

1a. You know the number of species in each group. You need to find the total number of species.   **b.** Add the numbers for all groups.   **c.** The total is 4,888,288 species.   **d.** Round the number of species in each group to the nearest thousand and add. This gives an estimate of 4,889,000. This is close to the calculated answer. So the answer seems reasonable.

Chapter 1 Review

1. 9   **2.** -10 **3.** 36   **4.** $-3x + 4$
5. $5x - 2$
Drawing: 🍌 + (🍎 + 🍓)

Lesson 2-1

1.
```
–4 –3 –2 –1  0  1  2  3  4  5  6  7
```
2.
```
–4 –3 –2 –1  0  1  2  3  4  5  6  7
```
3.
```
–4 –3 –2 –1  0  1  2  3  4  5  6  7
```
4.
```
–4 –3 –2 –1  0  1  2  3  4  5  6  7
```

Chapter 2 Review

1st Play: 12; 28
2nd Play: -5; 33
3rd Play: 18; 15
4th Play: 16; -1
Yes. The negative number, -1, signifies a touchdown.

Chapter 3 Review

1. 40   **2.** -50 **3.** 1200   **4.** 3850
5. 1925   **6.** 1975

Mrs. Acevedo was born in 1975, so subtract that year from the current year to find her age.

Chapter 4 Review

ACROSS 1. $6ab^3$ **3.** $\dfrac{2a}{b^2}$ **4.** $\dfrac{1}{81}$ **5.** $\dfrac{4}{7}$

8. $\dfrac{5x}{y^3}$ **10.** 56   **12.** $\dfrac{x^4}{6y}$ **13.** $48mn$
15. 30

DOWN 1. $60a^4$ **2.** 22   **3.** $21x^3y^4$ **6.** 7^5
7. 15   **9.** x^2y^3 **11.** $6mn$ **12.** x^6 **14.** 8^3

¹6	a	b	3					²2
0			³2	a	b	2		
a		⁴1	8	1				
⁵4	⁶7		x		⁷1			
	⁸5	⁹x	y	3		¹⁰5	¹¹6	
		2		y			m	
¹²x	4	6	y		¹³4	¹⁴8	m	n
6		¹⁵3	0			3		

Chapter 5 Review

1. Andrew: $a = 0.3$; Nancy: $n = 0.25$;
Jocelyn: $j = \dfrac{2}{5}$; Samantha: $s = \dfrac{1}{10}$;
Mark: $m = \dfrac{1}{20}$

2. $\dfrac{1}{20}, \dfrac{1}{10}, \dfrac{1}{4}, \dfrac{3}{10}, \dfrac{2}{5}$
3. Jocelyn ate the most, and Mark ate the least.   **4.** Drawings may vary so long as sizes of each slice are correct relative to each other.

Chapter 6 Review

1–15. Sample answers are given.
1. Kelton   **2.** 3 out of 4   **3.** Steve
4. 2.5   **5.** Jack   **6.** $6.75   **7.** Monique
8. 2 out of 5   **9.** Kelton   **10.** Kelton
11. 0.3   **12.** 90%   **13.** 0.4   **14.** 75%

15. $\dfrac{9}{10}$ **16.** $14.40   **17.** 1020 were male.

18a. 17.5%   **18b.** 82.5%

Answer Key

Answer Key

Chapter 7 Review

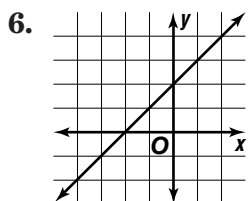**1.** $x < -1$ **2.** $x = -8$ **3.** $x = 4$
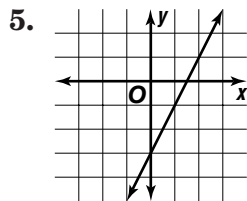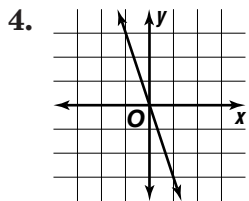**4.** $x < 16$ **5.** $x > 16$ **6.** $x = 6$
7. $x = -27$

The hidden picture looks like this:
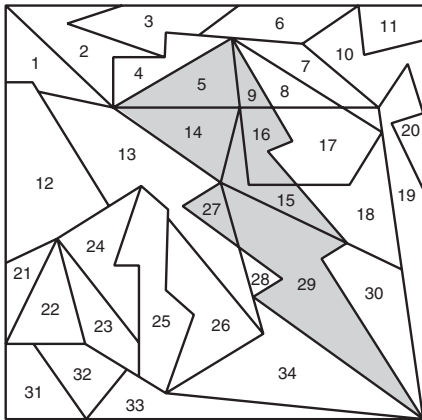
Lesson 8-2

4–6. Solutions will vary.

4.

5.

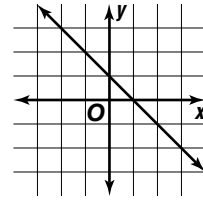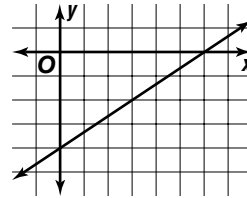**6.**

Lesson 8-3

1. x-intercept: $1\frac{1}{2}$;
y-intercept: -3
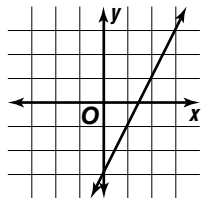
2. x-intercept: 1;
y-intercept: 1

3. x-intercept: 6;
y-intercept: -4

4. x-intercept: 4;
y-intercept: 2
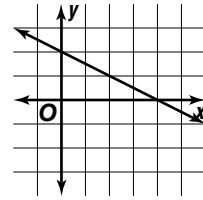
5. x-intercept: $\frac{2}{3}$;
y-intercept: -2
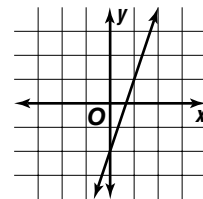
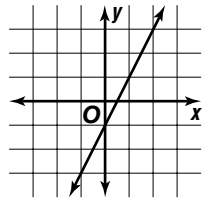**6.** x-intercept: 2;
y-intercept: 4
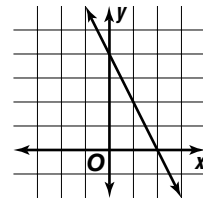
7. x-intercept: 3;
y-intercept: 3
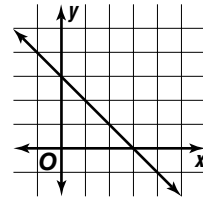
8. x-intercept: -6;
y-intercept: 2
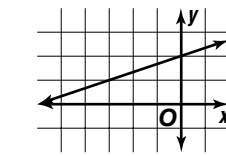
Answer Key
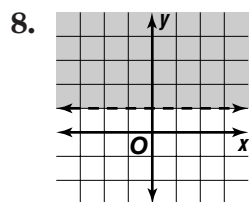
9. x-intercept: $\frac{1}{2}$;

  y-intercept: -1

Lesson 8-9

2.

Lesson 8-10

2.

6.

7.

8.

9.

10.

11.
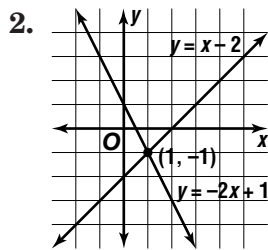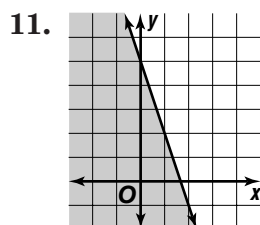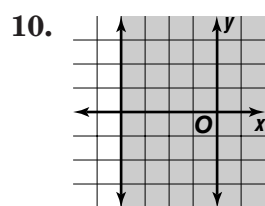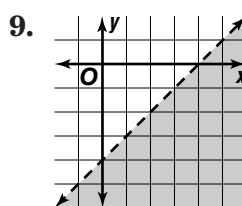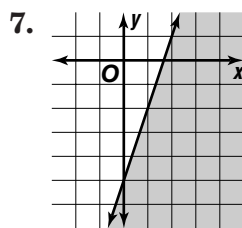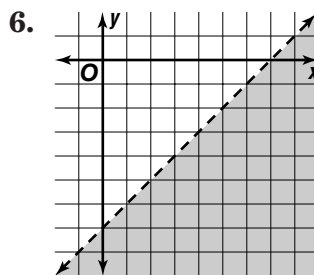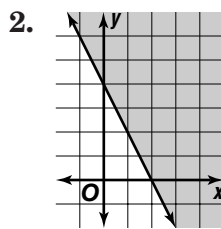
Chapter 8 Review

1. $f(x)$ and $g(x)$ **2.** $x = -3$ **3.** $y = 0$
4. 1   **5.** $f(x)$ only   **6.** -4

The solution to the puzzle is
BOILED EGGS.

Chapter 9 Review

1–5. Sample answers are given.
1. Equation: $80^2 + 30^2 = c^2$
  Solution: $c = 85.44$ in.
  Actual: 85.5 in.
2. Equation: $48^2 + 36^2 = c^2$
  Solution: $c = 60$ in.
  Actual: 36.13 in.
3. Equation: $16^2 + b^2 = 19^2$
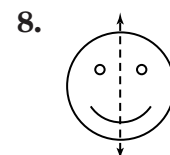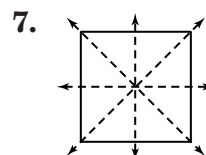 Solution: $b = 10.25$ in.
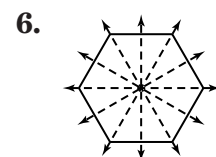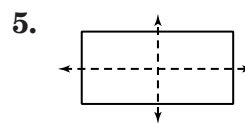 Actual: 12 in.
4. Equation: $74^2 + b^2 = 80^2$
  Solution: $b = 30.40$ in.
  Actual: actual diagonal was 38 in.
5. The solutions were different from the actual measurements in most cases because it was hard to get an exact measurement, especially on the TV and bed.

Lesson 10-3

5.

6.

7.

8.

Answer Key

Chapter 10 Review

136	38	45	115
59	101	94	80
87	73	66	108
52	122	129	31

Sum = 334

Chapter 11 Review

Hat: 96 in^3
Head: 216 in^3
Neck: 9 in^3
Arm: 106 in^3
Torso: 1500 in^3
Leg: 226 in^3
Foot: 90 in^3

Total volume = 2665 in^3

Lesson 12-1

1.
1	2 2 8
2	2 7
3	3
4	2 3

$4|2 = 42$

2.
8	1
9	1
10	5 9
11	4 5 9
12	0

$12|0 = 120$

3.
5	1 3 7 9
6	1 3 8
7	
8	1 9
9	0

$9|0 = 9.0$

4.
0	3 5 7
1	0 1 5 8
2	1 2
3	0

$3|0 = 30$

5.
28	4
29	2
30	5 7 9
31	6
32	
33	2

$28|4 = \$28,400$

Median price: \$30,700; Choice of the better representation will vary.

Lesson 12-3

4.

Lesson 12-6

1.

3.

4.
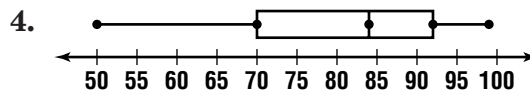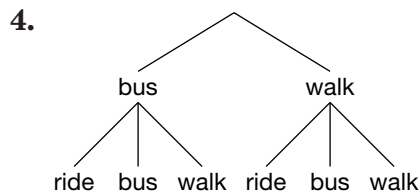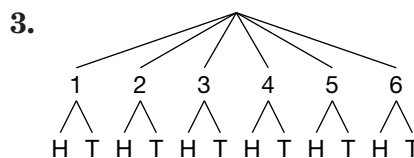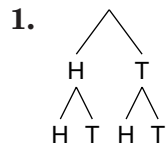
Chapter 12 Review

1–5. Sample answers are given.

1.

Name	Age
Mom	38
Dad	41
Me	13
Larry	8
Juanita	4
Grandma	63
Grandpa	68
Uncle Juan	25
Aunt Mary	30
Cousin Margarita	2

Answer Key

2.

6	3 8
5	
4	1
3	0 8
2	5
1	3
0	2 4 8

$2|5 = 25.$

range: 66; median: 27.5; upper quartile: 41; lower quartile: 8; interquartile range: 33

3.


```
0  5  10 15 20 25 30 35 40 45 50 55 60 65 70
```
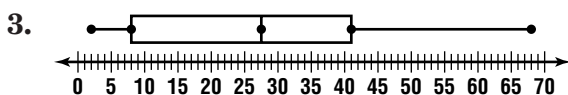
4. I think that the stem-and-leaf plot best models the data because it organizes the data so you can easily see the range of ages from least to greatest.

5a. $\dfrac{1}{10}$ **5b.** $\dfrac{3}{10}$ **5c.** $\dfrac{1}{10}$ **5d.** 9

Lesson 13-6

1.

$y = x^2$

2.

$y = x^3$

3.

$y = x^2 - 2$

4.

$y = x^3 - 1$

5.

$y = x^3 + 2x$

6.

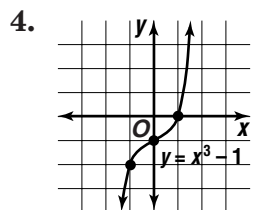$y = 2x^2$

7.

$y = x^2 + 3$

8.

$y = 2x^3 + 1$
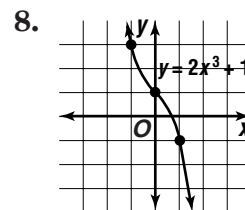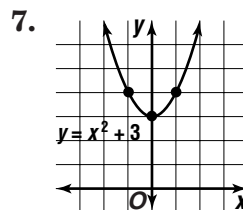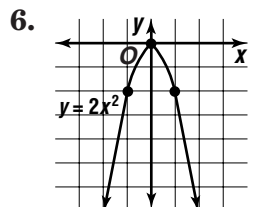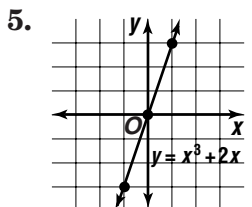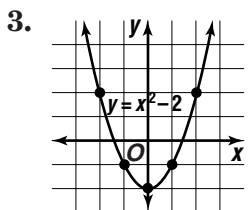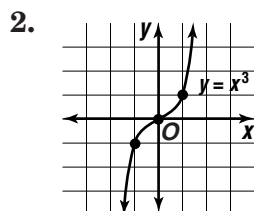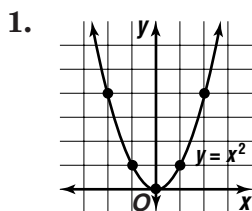
Chapter 13 Review

1. 8   **2.** $32x^{15}$ **3.** $3x^9$ **4.** $x + 6y$
5. $-6a + 8b - 1$ **6.** $12x^2 + 15x$
7. $x^2 + 6x + 8$ **8.** The student needs to supply a polynomial with a degree of 4. To find the degree of a polynomial, you must find the degree of each term. The greatest degree of any term is the degree of the polynomial. Sample answer: $x^2 + 2y^4$ has a degree of 4 because the first term has a degree of 2 and the second term has a degree of 4; since 4 is greater, the degree of the polynomial is 4.   **9.** The student needs to supply two polynomials that when added, have a sum of $4x + 9$. To add polynomials, you add the like terms. Sample answer: $(3x + 5) + (x + 4)$; In this sentence, $3x + x = 4x$ and $5 + 4 = 9$.   **10.** The student needs to supply two polynomials that when added, have a sum of $-x + 7$. To add polynomials, you add the like terms. Sample answer: $(2x + 6) + (-3x + 1)$ **11.** The student needs to supply two polynomials that when subtracted, have a difference of $3x + 1$. To subtract polynomials, you subtract the like terms. Sample answer: $(6x + 5) - (3x + 4)$ **12.** The student needs to supply two polynomials that when multiplied, have a product of $x^2 - 16$. Sample answer: $(x + 4)(x - 4)$