Data Analysis and Probability Answers

Chapter 1

Check What You Know, page 1

1. $\frac{1}{8}$
2. $\frac{1}{2}$
3. $\frac{1}{2}$
4. $\frac{1}{3}$
5a. penny
5b. $\frac{3}{5}$
6. no
7. no
8. yes
9. $\frac{7}{13}$
10a. $\frac{51}{100}$
10b. experimental

Lesson 1.1, page 2

	a	b
1.	heads, tails	yes
2.	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Answers will vary.
3.	red marble, green marble	red marble
4.	all names	yes

Lesson 1.1, page 3

1. $\frac{1}{2}$
2. $\frac{1}{3}$
3. $\frac{1}{6}$
4. $\frac{1}{3}$
5. $\frac{1}{6}$
6. $\frac{1}{6}$
7. $\frac{1}{3}$
8. 0

Lesson 1.1, page 4

1. 5
2. $\frac{1}{5}$
3. $\frac{3}{5}$
4. $\frac{2}{5}$
5. $\frac{2}{5}$
6. $\frac{4}{5}$
7. $\frac{2}{9}$
8. $\frac{7}{9}$
9. $\frac{2}{3}$
10. 0

Lesson 1.1, page 5

11. $\frac{3}{7}$
12. $\frac{1}{7}$
13. $\frac{8}{15}$
14. $\frac{7}{15}$
15. 8
16. $\frac{1}{8}$
17. $\frac{1}{4}$

Lesson 1.2, page 6

1. $\frac{2}{3}$
2. $\frac{5}{8}$
3. $\frac{1}{2}$
4. $\frac{3}{8}$

Lesson 1.2, page 7

1. $\frac{3}{10}$
2. $\frac{2}{5}$
3. $\frac{1}{5}$
4. $\frac{1}{10}$
5. $\frac{1}{2}$
6. $\frac{1}{3}$
7. $\frac{1}{6}$
8. $\frac{1}{6}$
9. $\frac{1}{6}$
10. $\frac{1}{3}$

Lesson 1.2, page 8

1. $\frac{1}{2}$
2. $\frac{3}{10}$
3. $\frac{1}{5}$
4. $\frac{7}{10}$
5. $\frac{1}{3}$
6. $\frac{1}{6}$
7. $\frac{1}{6}$
8. $\frac{5}{12}$
9. $\frac{1}{3}$
10. $\frac{1}{3}$
11. $\frac{1}{3}$
12. $\frac{1}{6}$
13. $\frac{5}{12}$
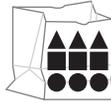14. $\frac{1}{3}$
15. $\frac{1}{4}$

Lesson 1.3, page 9

	a	b
1.	yes	no
2.	yes	no
3.	no	yes
4.	no	no
5.	no	no
6.	no	yes

Data Analysis and Probability Answers

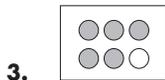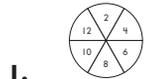## Lesson 1.3, page 10
Answers will vary.

1. Spinner must have an equal number of same size spaces with an equal number of stars and diamonds.
2. Spinner must have an equal number of same size spaces with numbers 1, 2, 3, and 4.
3.
4. Answers will vary but may include

Lesson 1.4, page 11

	a	b
1.	not equal	equal
2.	equal	not equal
3.	equal	equal
4.	not equal	not equal

Lesson 1.4, page 12

1.
2.
3.

Lesson 1.4, page 13

1a. $\frac{2}{6}$ or $\frac{1}{3}$ **1b.** $\frac{3}{6}$ or $\frac{1}{2}$

2a. $\frac{1}{2}$ **2b.** $\frac{1}{2}$

3a. $\frac{11}{90}$ **3b.** $\frac{10}{85}$ or $\frac{2}{17}$

3c. the first bag

4a. $\frac{16}{25}$ **4b.** $\frac{12}{19}$

Lesson 1.5, page 14

1. $\frac{1}{6}$
2. 30
3. $\frac{2}{5}$
4. $\frac{1}{6}$
5. $\frac{2}{5}$
6. $\frac{1}{4}$

Lesson 1.5, page 15

7a. $\frac{1}{12}$ **7b.** $\frac{1}{6}$

7c. theoretical, $\frac{1}{12}$ **7d.** $\frac{5}{9}$

7e. $\frac{1}{2}$ **7f.** experimental, $\frac{1}{18}$

8a. $\frac{1}{6}$ **8b.** $\frac{1}{6}$

8c. They are the same.   **8d.** $\frac{71}{144}$

8e. $\frac{1}{2}$ **8f.** theoretical, $\frac{1}{144}$

Lesson 1.6, page 16

1. 0.42
2. 0.45; yes
3. 0.81

Lesson 1.6, page 17

4. Generate random integers from 1 to 4, inclusive. Let 1 be a success. 2, 3, or 4 is a failure.
5. Generate random integers from 1 to 6, inclusive. Let 2, 4, or 6 be a success. 1, 3, or 5 is a failure.

Check What You Learned, page 18

1. $\frac{1}{2}$
2. $\frac{3}{8}$
3. $\frac{5}{26}$
4a. $\frac{2}{5}$
4b. $\frac{1}{5}$
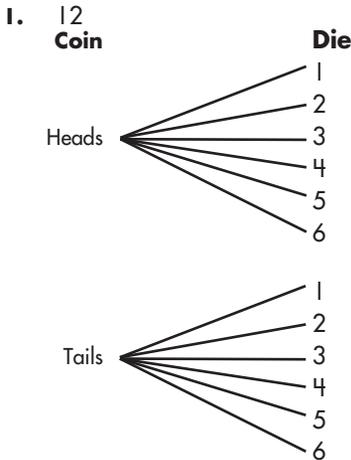5. $\frac{2}{5}$
6. yes
7. yes
8. no
9. $\frac{79}{100}$
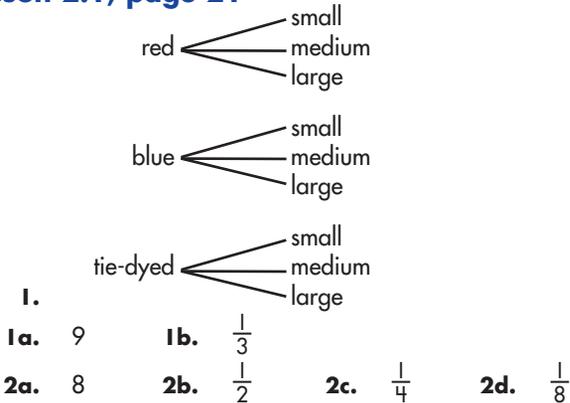
Data Analysis and Probability Answers

Chapter 2
Check What You Know, page 19

1.

Thin crust — mushroom, onion, pepperoni, sausage
Thick crust — mushroom, onion, pepperoni, sausage

2. 8
3. $\frac{1}{8}$
4. $\frac{2}{9}$
5. $\frac{1}{720}$
6. $\frac{1}{4}$
7. $\frac{1}{6}$
8. $\frac{1}{26}$
9. $\frac{1}{16}$
10. $\frac{1}{3}$

Lesson 2.1, page 20

1. 12

Coin   **Die**

Heads — 1, 2, 3, 4, 5, 6

Tails — 1, 2, 3, 4, 5, 6

Lesson 2.1, page 21

red — small, medium, large

blue — small, medium, large

tie-dyed — small, medium, large

1.
1a. 9   1b. $\frac{1}{3}$
2a. 8   2b. $\frac{1}{2}$ 2c. $\frac{1}{4}$ 2d. $\frac{1}{8}$

Lesson 2.2, page 22

1. $\frac{6}{35}$
2. $\frac{9}{25}$
3. $\frac{1}{4}$
4. $\frac{9}{64}$

Lesson 2.2, page 23

1. $\frac{1}{8}$
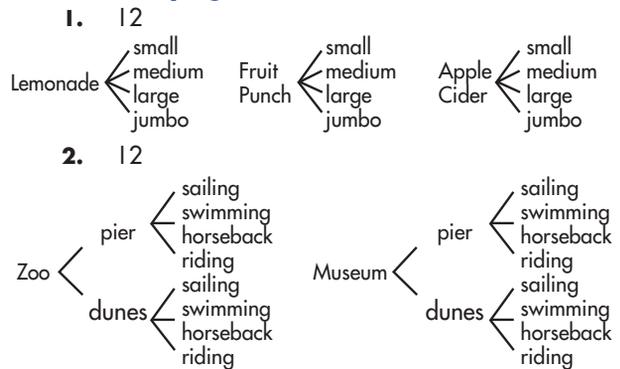2. $\frac{9}{10}$
3. $\frac{1}{10}$
4. $\frac{1}{220}$

Lesson 2.2, page 24

	a	b
1.	36	12
2.	8	104
3.	36	72
4.	208	144

Lesson 2.3, page 25

1. 288
2. 60
3. 320
4. 20
5. 180
6. 192
7. 280

Lesson 2.4, page 26

1. 12

Lemonade — small, medium, large, jumbo
Fruit Punch — small, medium, large, jumbo
Apple Cider — small, medium, large, jumbo

2. 12

Zoo —
pier — sailing, swimming, horseback riding
dunes — sailing, swimming, horseback riding

Museum —
pier — sailing, swimming, horseback riding
dunes — sailing, swimming, horseback riding

Lesson 2.4, page 27

1. 8
2. 18
3. 6; J<K—L, L—K   K<J—L, L—J   L<K—J, J—K

Data Analysis and Probability Answers

Lesson 2.4, page 28

1.

	black	brown	blue	khaki
black	bl/bl	bl/br	bl/blu	bl/k
blue	blu/bl	blu/br	blu/blu	blu/k
red	r/bl	r/bl	r/bl	r/k
green	g/bl	g/br	g/blu	g/k
yellow	y/bl	y/br	y/blu	y/k

$\frac{2}{20}$ or $\frac{1}{10}$

2.

	1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9
2	3	4	5	6	7	8	9	10
3	4	5	6	7	8	9	10	11
4	5	6	7	8	9	10	11	12
5	6	7	8	9	10	11	12	13
6	7	8	9	10	11	12	13	14

$\frac{5}{48}$

Lesson 2.5, page 29

Strategies will vary.

1. 8
2. 20
3. $\frac{1}{9}$
4. $\frac{1}{26}$

Lesson 2.5, page 30

Strategies will vary.

1. $\frac{1}{25}$
2. 48
3. 27
4. $\frac{1}{8}$

Lesson 2.5, page 31

Strategies will vary.

1. 36
2. $\frac{1}{6}$
3. $\frac{1}{9}$
4. 12

Lesson 2.5, page 32

1. $\frac{1}{6}$
2. $\frac{1}{3}$
3. $\frac{5}{6}$
4. $\frac{1}{36}$
5. $\frac{1}{5}$
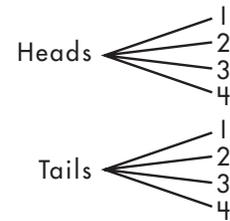6. $\frac{7}{10}$
7. $\frac{2}{15}$
8. $\frac{13}{15}$

Lesson 2.5, page 33

1.

CHART

Spinner	Coin	
	Heads	**Tails**
1	H1	T1
2	H2	T2
3	H3	T3
4	H4	T4

TREE DIAGRAM

Coin   Spinner

Heads
1
2
3
4

Tails
1
2
3
4

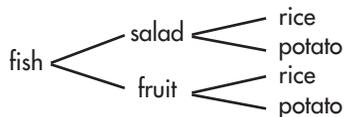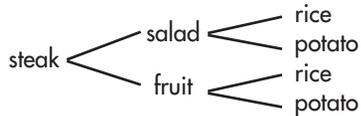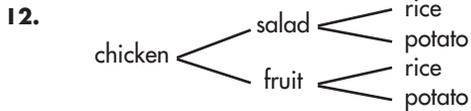2. 8
3. 12.5%
4. 87.5%
5. 25.0%

Check What You Learned, page 34

1. $\frac{1}{13}$
2. $\frac{1}{4}$
3. $\frac{17}{52}$
4. $\frac{3}{4}$
5. $\frac{1}{167}$
6. $\frac{1}{16}$
7. $\frac{1}{52}$
8. $\frac{4}{663}$
9. $\frac{13}{204}$

Data Analysis and Probability Answers

Check What You Learned, page 35

10. $\frac{5}{57}$

11. $\frac{20}{171}$

12.

13. 12
14. 50.0%
15. 16.7%
16. 8.3%

Chapter 3

Check What You Know, page 36

1. statistical
2. not statistical
3. statistical
4. not statistical
5. biased
6. random
7. random
8. 30
9. 175
10. $\frac{20}{50}$ or $\frac{2}{5}$

Lesson 3.1, page 37

	a	b
1.	statistical	not
2.	statistical	statistical
3.	not	not
4.	not	statistical
5.	not	statistical

Lesson 3.1, page 38

Answers may vary.

1. How tall are the students in my school?
2. What scores did students score on the last spelling test?
3. How many pages are in the typical 6th grade novel?
4. How many students are there per PE class in my school?
5. How much do average apples cost?
6. What is the most popular car in the U.S.?
7. How many minutes do children exercise per week?

Lesson 3.2, page 40

Step 5. Interpretations will vary, but they should answer the original question, including a comparison between males and females. Example: Dogs are the most popular pet overall, but males prefer dogs more strongly than females do.

Lesson 3.3, page 41

1. random
2. biased
3. biased
4. random
5. random
6. biased

Lesson 3.3, page 42

1. systematic random
2. simple random
3. systematic random
4. stratified random
5. voluntary response

Lesson 3.4, page 43

1. 5
2. 16.67%
3. 20 or 21
4. 26.67%
5. 33 or 34
6. 20

Lesson 3.4, page 44

1. 20%
2. 36
3. 108
4. 9
5. 30%
6. 9

Lesson 3.4, page 45

1. 20
2. 100
3. 25%
4. 25
5. 35
6. 40

Data Analysis and Probability Answers

Check What You Learned, page 46

1. not statistical
2. statistical
3. not statistical
4. statistical

	a	b
5.	biased	random
6.	random	random

7. 22
8. 7
9. $\frac{10}{40}$ or $\frac{1}{4}$

Mid-Test, page 47

1a. $\frac{7}{15}$	1b. $\frac{2}{15}$	1c. $\frac{2}{5}$	1d. $\frac{8}{15}$

2. $\frac{1}{2}$

3a. $\frac{1}{4}$	3b. $\frac{1}{36}$	
4a. $\frac{1}{12}$	4b. $\frac{1}{4}$	4c. $\frac{1}{4}$
5a. $\frac{7}{10}$	5b. $\frac{3}{10}$	5c. $\frac{7}{30}$
6a. $\frac{1}{4}$	6b. $\frac{1}{2}$	
7a. $\frac{1}{2}$	7b. $\frac{9}{20}$	7c. $\frac{1}{2}$

Mid-Test, page 48

8. no
9. yes
10. no
11. no
12. $\frac{199}{200}$
13. 282
14. $\frac{5}{9}$
15a. 12
15b. Possible answer. Use a random number generator. Generate random 0s and 1s; 0 = heads 1 = tails; generate random 1, 2, 3, 4, 5, 6 for the number the die lands on.
15c. $\frac{1}{12}$
16. Tree diagram is below:

Possible combinations = 8
TTT – TTF – TFT – TFF
FTT – FTF – FFT – FFF

Mid-Test, page 49

17. $\frac{1}{20}$
18. $\frac{1}{216}$
19. $\frac{1}{100}$
20. 15,600

21a. statistical	21f. statistical
21b. statistical	21g. not statistical
21c. not statistical	21h. not statistical
21d. not statistical	21i. statistical
21e. statistical	21j. not statistical

Mid-Test, page 50

22. biased
23. random
24. biased
25. biased
26. random
27. 100
28. 525
29. $\frac{1}{1000}$

Check What You Know, page 51

		a	b	c
1.	mean:	6.4	21	3.5
	median:	8	20.5	3.5
	mode:	9	17	none
	range:	7	15	7

2a. $\frac{80 + 86 + 79 + 81 + n}{5} = 84$

2b. 94

3a. $\frac{720}{n} = 24$

3b. 30

4. 32, 35, 37
5. 61
6. 44
7. 21
8. 40

Data Analysis and Probability Answers

Check What You Know, page 52

9.

Popularity of Colors for Cars			
Color	Frequency	Cumulative Frequency	Relative Frequency
red	25	25	17.9%
blue	20	45	14.3%
black	16	61	11.4%
silver	43	104	30.7%
white	36	140	25.7%

10. 140
11. silver
12. 40%
13. 7
14. 8
15. 20
16. 7.5
17. 12
18. 14
19. 8

Lesson 4.1, page 53

	a	b
1.	mean: 20	mean: $27\frac{1}{2}$
	median: 20	median: $26\frac{1}{2}$
	mode: 25	mode: $21, 36$
2.	mean: 17	mean: $18\frac{1}{2}$
	median: 8	median: 5
	mode: none	mode: 0

Lesson 4.1, page 54

1. 81, 84, 88, 93, 97
mean: 88.6; median: 88; mode: none; range: 16
2. 83, 84, 84, 85, 86
mean: 84.4; median: 84; mode: 84; range: 3
3. 85, 88, 90, 92, 92
mean: 89.4; median: 90; mode: 92; range: 7
4. Kara, because her scores had the smallest range

Lesson 4.1, page 55

	a	b
1.	$9.41	$9.75
2.	$9.50	$8.25
3.	$9.50; $10	$8

4. Sam's Pet World pays better. The $20 wage in the set for Beth's Pets is an outlier that increases the mean above Sam's. However, the higher median and mode show that most of Sam's employees are paid better.
5. the mean, because it provides the highest value for this set of wages

Lesson 4.1, page 56

1. 17
2. 34
3. $285

Lesson 4.2, page 57

	a	b
1.	3	5
2.	10	10
3.	8	4
4.	11	14
5.	7	9

Lesson 4.3, page 58

	a	b
1.	5; 2; 7; 5	85; 75; 92.5; 17.5
2.	90; 72.5; 97.5; 25	12; 5; 43; 38
3.	16.5; 4; 39; 35	29; 16; 64; 48

Lesson 4.4, page 59

1a. 15.29; 5.29, 5.29, 0.29, 0.29, 0.71, 2.71, 7.71; 3.18
1b. 48.29; 10.29, 7.29, 3.29, 2.71, 3.71, 6.71, 7.71; 5.96
2a. 17.57; 7.57, 6.57, 5.57, 0.43, 4.43, 7.43, 7.43; 5.63
2b. 45.1; 34.1, 23.1, 23.1, 12.1, 1.1, 9.9, 9.9, 9.9, 20.9, 42.9; 18.7

Lesson 4.5, page 60

1. 37; 16.5; 9
2. 35; 14; 8
3. 76; 37; 19.1
4. 8; 4; 2.04
5. 62; 16; 13.08
6. 42; 23; 12

Lesson 4.6, page 61

Pet Ownership				
Number of Pets	Frequency	Cumulative Frequency	Relative Frequency (fraction)	Relative Frequency (percent)
0	8	8	$\frac{2}{15}$	13.3%
1	29	37	$\frac{29}{60}$	48.3%
2	15	52	$\frac{1}{4}$	25.0%
3	6	58	$\frac{1}{10}$	10%
4+	2	60	$\frac{1}{30}$	3.3%

1. 60
2. $\frac{7}{20}$

Data Analysis and Probability Answers

Lesson 4.6, page 62

Points Scored per Basketball Game			
Points	Frequency	Cumulative Frequency	Relative Frequency
30–39	3	3	$\frac{1}{10}$
40–49	5	8	$\frac{1}{6}$
50–59	8	16	$\frac{4}{15}$
60–69	10	26	$\frac{1}{3}$
70–79	4	30	$\frac{2}{15}$

1. 30
2. 10
3. 4.6, 4.6, 4.8, 5.1, 5.2, 5.2, 5.2, 5.3, 5.4, 5.4, 5.4, 5.5, 5.6, 5.6, 5.7, 5.8, 5.9, 5.9, 6.0, 6.1

Heights of Students in a Class			
Height, in Feet	Frequency	Cumulative Frequency	Relative Frequency
4.5–4.9	3	3	15%
5.0–5.4	8	11	40%
5.5–5.9	7	18	35%
6.0–6.5	2	20	10%

4. 20
5. 5.0–5.4
6. 10%
7. 90%

Lesson 4.7, page 63
1. 73, 91
2. 115
3. 73
4. 42

Lesson 4.7, page 64
1. Keys will vary. Example: 3 | 1 = 31

Stem	Leaves
2	2 6 7 9 9
3	1 2 5
4	4 6 6
5	3 5

2. Keys will vary. Example: 43 | 5 = 435

Stem	Leaves
43	2 5
44	1 2 3
45	1 1 5 5
46	9 9

3. Keys will vary. Example: 5 | 9 = 59

Stem	Leaves
4	0 6 9
5	2 6 6 9 9 9
6	0 0 0 2 3 3 3 3 4 8
7	0 0 2 4 4 6 6
8	0 1 2 3

4. 63 degrees
5. 43 degrees
6. 63 degrees

Lesson 4.8, page 65
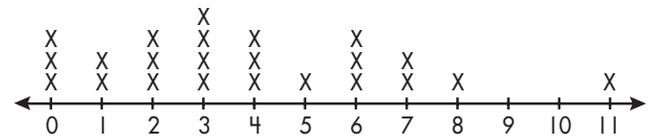
1. 3; 11
2. 23; 3
3. 11

Lesson 4.8, page 66
1. 56 and 57
2. 25
3. 26
4. 56.5
5. Sample answer: from 54 through 60 transactions, because most clerks have been performing within this cluster of transactions
6. Sample answer: above 65 transactions, because a number beyond 65 would be an outlier, indicating an exceptionally high number of transactions

Data Analysis and Probability Answers

Lesson 4.9, page 67

1. 50
2. 10
3. 40
4. 20
5. 25
6. 10; 35
7.
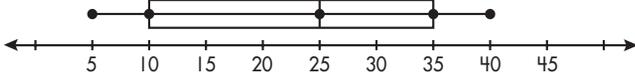
Lesson 4.9, page 68

1. 14
2. 7
3. $15; $24
4. top 50%; the distance from the median to the upper extreme appears greater than to the lower extreme
5. 300
6. 150
7. yes, because 50% of flights carry 300 or more passengers, and planes this size could be responsible for some of the flights carrying fewer than 300

Lesson 4.10, page 69

1. 12
2. pounds
3. 247
4. 280
5. 250
6. 239
7. 280
8. 250
9. mean
10. The mean would increase.
11. The mode would not change.
12. The median would not change.
13. 250
14. 280

Lesson 4.10, page 70

1. Seattle
   a. Seattle's interquartile range and overall range span a narrow set of mild temperatures.
   b. Seattle's temperatures cluster compactly in a mild range.
2. Cleveland
   a. Cleveland has wider ranges and extremes.
   b. Cleveland has temperature clusters at the low end and at the higher end.
3. stem-and-leaf (means cannot be determined from box-and whisker plots)
4. probably box-and-whisker because the median is marked, but some students might prefer using the actual data provided in the stem-and-leaf plot
5. stem-and-leaf (modes cannot be determined from box-and whisker plots)
6. probably box-and-whisker because of its visual representation, but some students might prefer to consider the data clustering provided by the stem-and-leaf in their analysis of spread

Check What You Learned, page 71

1.

	a	b	c
mean:	22.8	28.7	9.1
median:	20	15	8
mode:	18	0	3, 4, 12
range:	41	113	17

2. mean
3. a. $\frac{24 + 20 + 26 + 14 + 18 + n}{6} = 20$
   b. 18
4. a. $\frac{n}{24} = 65$
   b. 1,560
5. Keys will vary. Example: 22 | 7 = 227

Stem	Leaves
22	2 7
23	5 6 9
24	3 4
25	1 6
26	0 7

6. none
7. 243
8. 222
9. 45

Grades 6–8
116
Answer Key

Data Analysis and Probability Answers

Check What You Learned, page 72

10.

Minutes	Frequency	Cumulative Frequency	Relative Frequency
30–34	4	4	26.7%
35–39	2	6	13.3%
40–44	7	13	46.7%
45–49	2	15	13.3%

11.
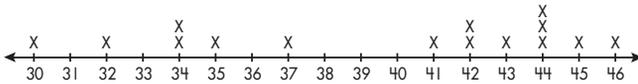
12.
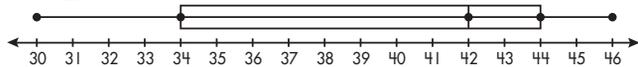
	a	b
13.	39.5	16
14.	42	46
15.	44	30
16.	34	10

Check What You Know, page 73

1.

Annual Product Exports			
Country	Sales (millions)	%	Degrees
Germany	$12	24%	86.4°
Great Britain	16	32%	115.2°
France	10	20%	72.0°
Canada	7	14%	50.4°
China	4	8%	28.8°
Korea	1	2%	7.2°
Total:	**$50**	**100%**	**360°**

Annual Product Exports
Total: $50 Million
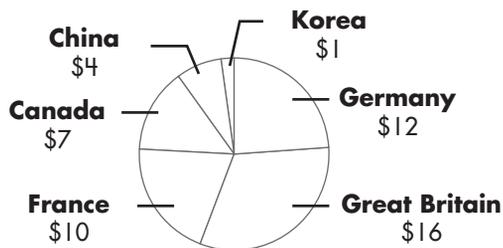
2. investment dollars by age group
3. a 15-year age group
4. 65–80 age group
5. investment dollars, in millions
6. 80–95 age group

Check What You Know, page 74

7.
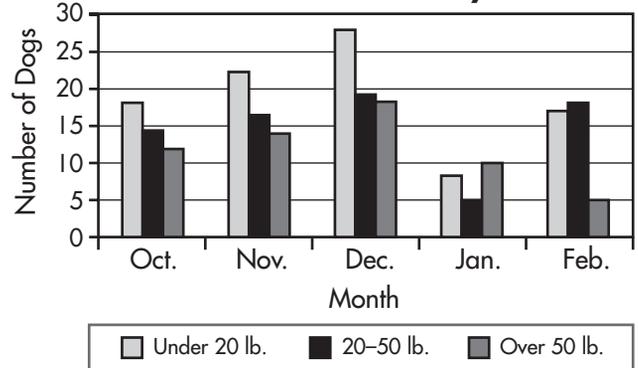
8. the number of new dog arrivals and adoptions from October–February
9. November and January
10. the age of homes and their selling price
11. no
12. no correlation

Lesson 5.1, page 75

1. June; February
2. 1,727; 66.8%
3. 857; 33.2%

Lesson 5.1, page 76

1. units sold over $400, units sold $200–399, and units sold under $200
2. a. units over $400 b. 675
3. 21.1%

Lesson 5.2, page 77

George Martin
Sources of Income, 2007–2011
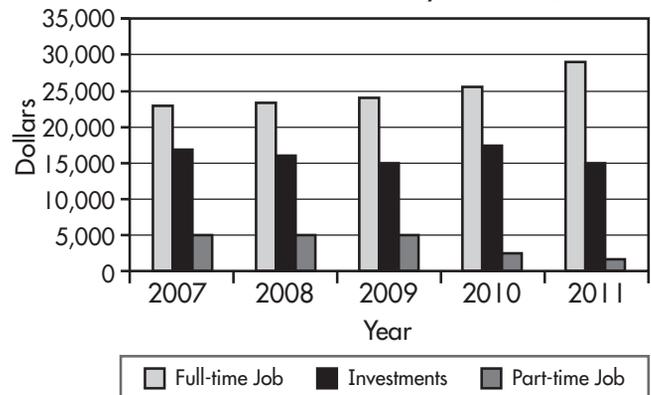
1. $44,767; $44,604
2. His other sources of income decreased.

Data Analysis and Probability Answers

Lesson 5.3, page 78
1. 11.5–12.0
2. 11–11.5
3. number of employees
4. driving miles
5. 72
6. 31

Lesson 5.4, page 79

Leland Outdoor Products
Average Number of Calls Over 3 Months
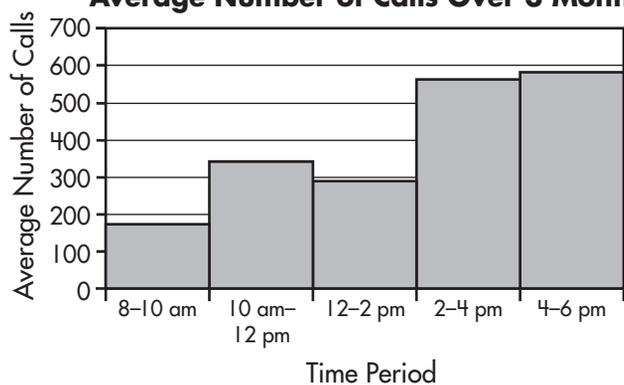
1. time periods; average number of calls
2. 100
3. 10 am–12 pm, 2–4 pm, 4–6 pm

Lesson 5.5, page 80
1. academic year enrollment
2. an increase in enrollment
3. Enrollment is flat from 2008–2009 to 2009–2010.
4. 32% increase
5. 3,605

Lesson 5.5, page 81
1. Venice
2. Miami
3. Plant A: Week 4; Plant B: Week 3; Plant C: Week 5
4. Plant C

Lesson 5.6, page 82
1. Sector A: 40% or 144°
2. Sector B: 10% or 36°
3. Sector C: 30% or 108°
4. Sector D: 20% or 72°

5.
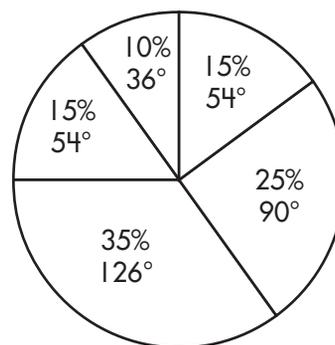
Lesson 5.6, page 83
1.

Income Source	Percent
Property Tax	58.2%
Interest from Reserve Fund	9.2%
Sales Tax	17.4%
Permits and Fees	5.1%
Fines	2.2%
State Grants	4.4%
Federal Grants	3.5%

2. property tax
3. 7.9%
4. more income than expenses: $1,184,515

Check What You Learned, page 84
1.
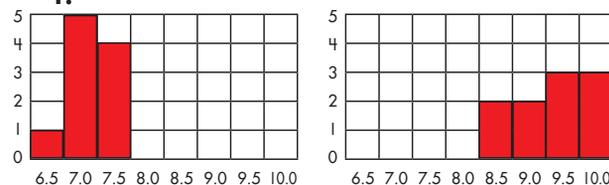
Mountain Hiking Online Magazine
Subscribers by Age Group, 2007–2010
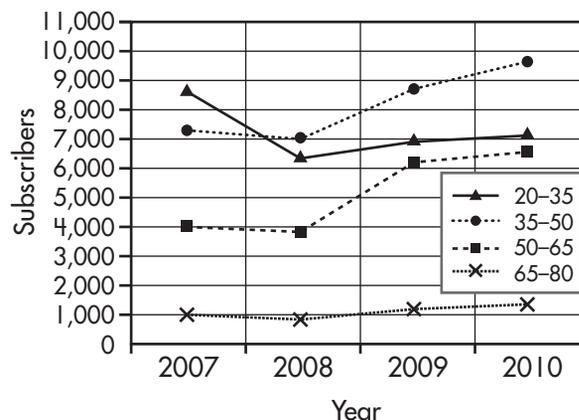
2. 20–35 age group; 65–80 age group
3. 2008
4. 35–50 and 50–65 age groups

Data Analysis and Probability Answers

Check What You Know, page 85

1. Test Scores and Hours of Study
2. positive
3. a student was not studying effectively
4.
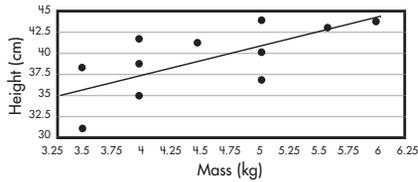
5. Height of dogs and Mass of dogs
6. positive
7. some dogs have a thinner build depending on their breed
8. $20\frac{2}{7}$ centimeters

Lesson 6.1, page 86

1. number of sales agents (x axis) to housing units sold per week (y axis)
2.
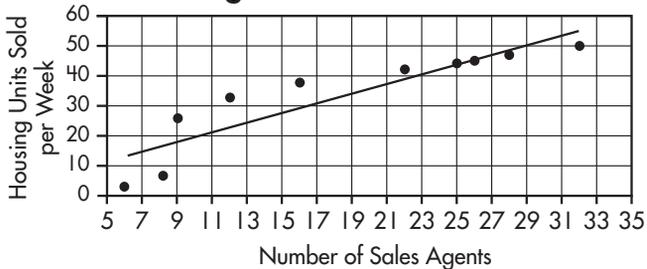
As the number of sales agents increases, the housing units sold per week increase.

Lesson 6.1, page 87

1. outlier
2. negative correlation
3. Sales of those pictures would increase.

Lesson 6.2, page 88

1.
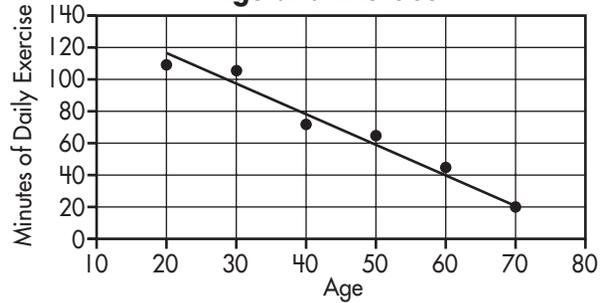
2. The scatter plot shows a negative correlation. As age increases, minutes of daily exercise decrease.
3. 0–20 min. per day
4. There is no correlation.
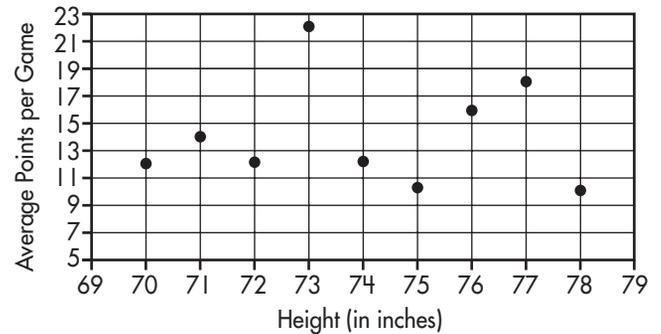
Lesson 6.3, page 89

1. 15 16 17 18 18 20 21 22 23 24
   75 70 75 65 80 75 80 85 80 85
2. negative; no relationship; positive
3.
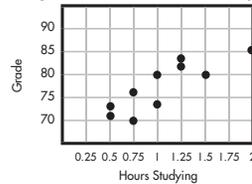
Note: student answers may vary depending on intervals chosen for axis labels.

Data Analysis and Probability Answers

Lesson 6.3, page 90

1. age and height
2. positive
3. 30
4. People stop growing after a certain age.
5. Price of Entrée and Number of Entrees Ordered
6. negative
7. Some expensive entrees are still popular.
8. Possible answer: People will pay a lot for certain house specialties.
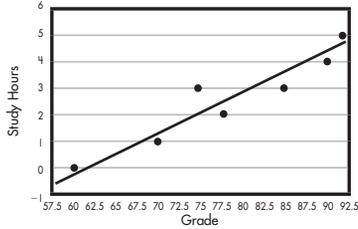
Lesson 6.4, page 91

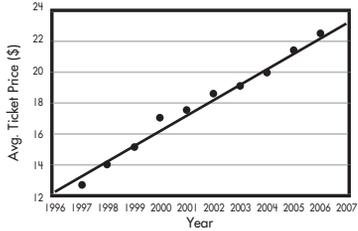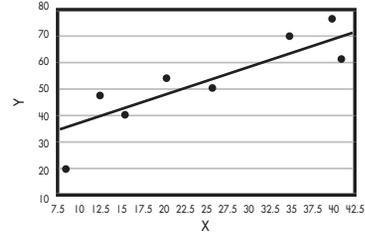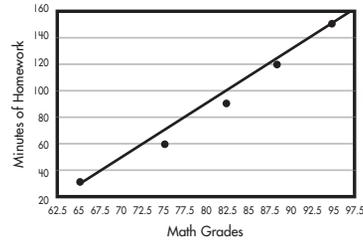**1a.**
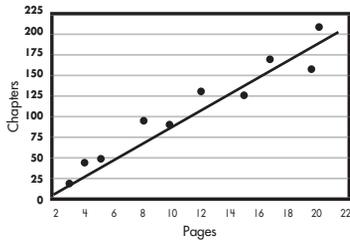
1b.
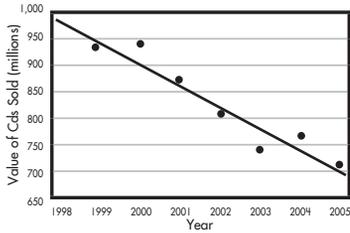
2a.

2b.

3a.

3b.
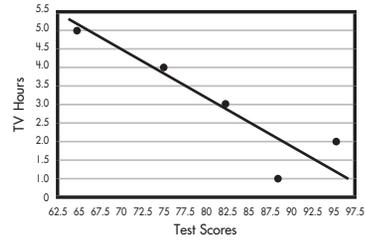
Lesson 6.4, page 92

1a.

Prediction: 77.5

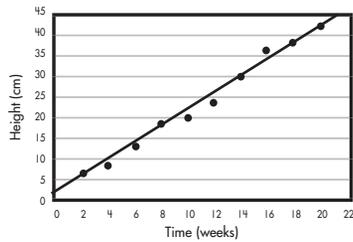**1b.**
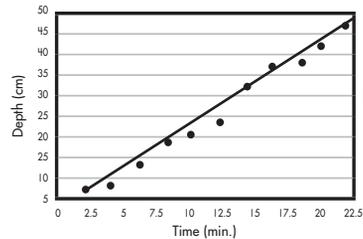
Prediction: 30

2a.
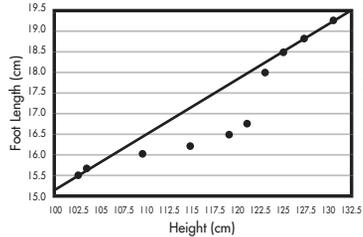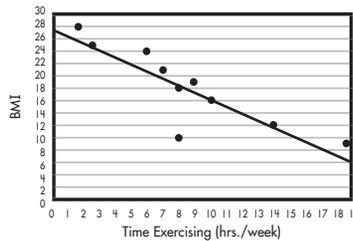

Prediction: 16

Data Analysis and Probability Answers

2b.

Prediction: 33

3a.

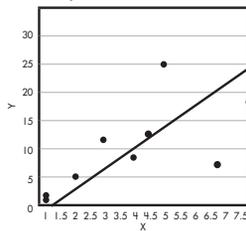Prediction: 11

3b.
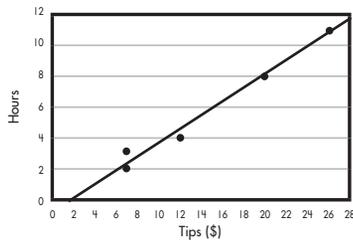
Prediction: 30

Lesson 6.5, page 93
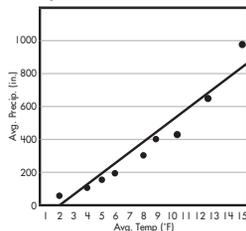
Answers will vary.

| **a** | **b** |

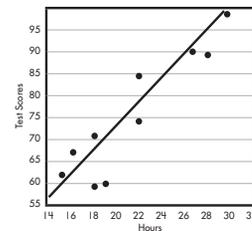**1.** $y = 3x - 1$ $y = 75x - 200$

Lesson 6.5, page 94

Answers will vary.

a

1. $y = \frac{8}{3}x + 18$

The slope gives the number of points a test score increases per hour.
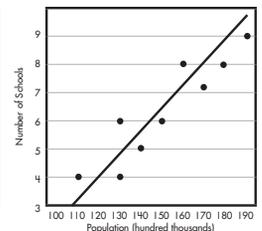The y-intercept is the score you would be expected to get if you studied 0 hours.

b

$y = \frac{4}{50}x - 6\frac{1}{5}$

The slope gives the increase in the number of schools for each increase in population.
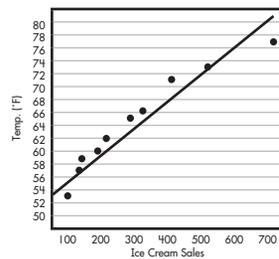The y-intercept is meaningless because it is negative.

2. $y = 16\frac{2}{3}x + 125$ $y = 2\frac{1}{2}x + 17$
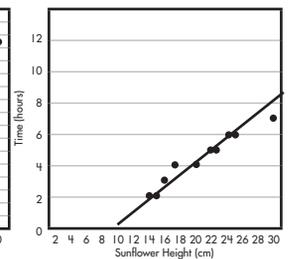
The slope gives the increase in temperature for each increase in sales.
The y-intercept represents the temperature when the amount of sales is zero.

The slope gives the increase of amount of time in the sun for each increase in height.
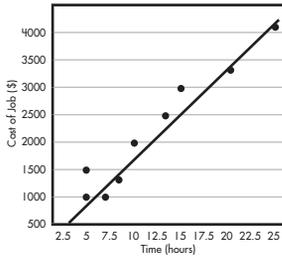The y-intercept represents the height of a plant when the amount of time in the sun is 0.

Data Analysis and Probability Answers

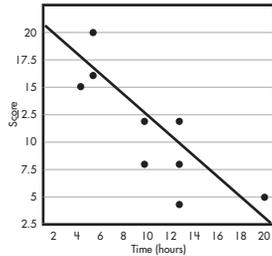## Lesson 6.5, page 95

Answers will vary.

1.

a $y = 166\frac{2}{3}x - 133\frac{1}{3}$

The slope gives the amount the cost of a job increases per hour. The y-intercept is meaningless because it is negative.
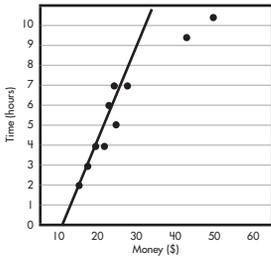

Cost of Job ($) vs. Time (hours)

b $y = -\frac{4}{5}x + 20$

The slope gives the decrease in score per hour. The y-intercept is the score when time equals 0.

Score vs. Time (hours)

2.

$y = 2x + 15$

The slope gives the increase in money per hour. The y-intercept is the amount of money when time equals 0.

Time (hours) vs. Money ($)

$y = 4.28x + 8$

The slope gives the increase in height for each increase in distance. The y-intercept represents the height when the distance is 0.

Height (inches) vs. Distance (miles)
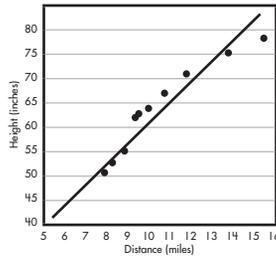
Lesson 6.6, page 96

1.

Wally's Sports Shop Sales April–Sept.

Dollars (thousands) vs. Month
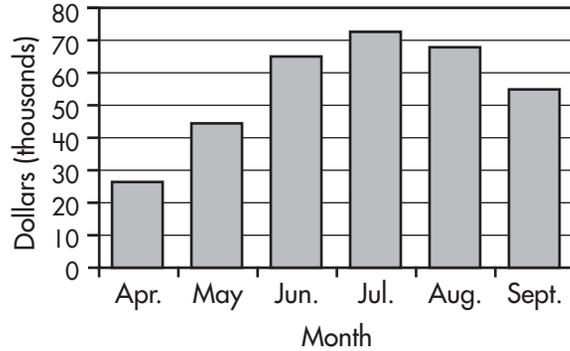
2. July
3a. Jackson
3b. Willow
3c. Tramore, Jackson
3d. 18

Lesson 6.6, page 97

4a. $1,800
4b. 38%
5a. January, May, June
5b. February, March
6. between 2.5 and 2.6 lbs.

Fish Weights

Weight (in pounds) vs. Week
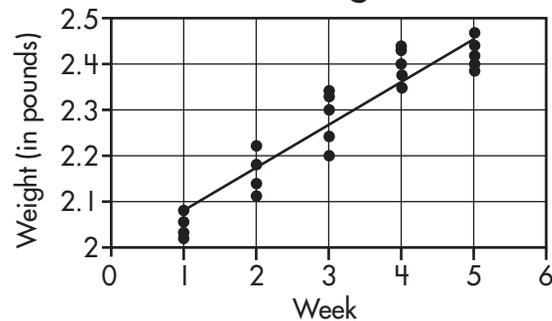
Lesson 6.7, page 98

1.

	Europe	Not Europe	Total
South America	120	190	310
Not South America	330	360	690
Total	450	550	1,000

2. 330
3. 360

Data Analysis and Probability Answers

Lesson 6.7, page 99

1.

	Spanish	Not Spanish	Total
French	0.12	0.19	0.31
Not French	0.33	0.36	0.69
Total	0.45	0.55	1.00

2. 0.19

3. 0.12

Check What You Know, page 100

Answers will vary.

	a	**b**
1.	$y = \frac{13}{9}x + 19\frac{5}{9}$	$y = \frac{5}{2}x + 25$
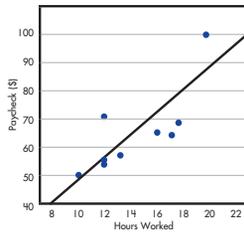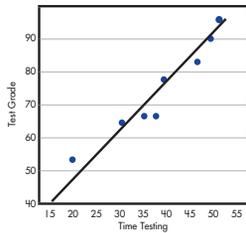
2.

	Run	Do Not Run	Total
Swim	35	65	100
Do Not Swim	125	25	150
Total	160	90	250

3. 65

4. 125

5. 35

Final Test (Chapters 1–6), page 101

1. 6

2. $\frac{1}{6}$

3. $\frac{1}{2}$

4. $\frac{1}{2}$

5. $\frac{1}{6}$

6. $\frac{11}{16}$

7. $\frac{1}{12}$

8. $\frac{20}{77}$

	a	**b**	**c**	**d**
9.	9.2	8	8	5
10.	22.7	22.5	none	18
11.	10.25	12	13	15

Final Test (Chapters 1–6), page 102

12. yes

13. no

14. yes

15. no

16. no

17. $\frac{1}{3}$

18. $\frac{1}{4}$

19. $\frac{1}{2}$

20. $\frac{1}{2}$

21. $\frac{5}{24}$

Final Test (Chapters 1–6), page 103

22. $\frac{9}{400}$

23. $\frac{9}{10}$

24. $\frac{15}{56}$

25.
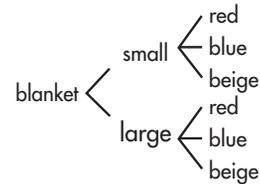
26. $\frac{1}{2}$

27. $\frac{1}{3}$

28. $\frac{1}{6}$

29. 4

30. 8

31. 4.5

32. 24

Final Test (Chapters 1–6), page 104

33. sources of Jan Farmer's 2010 income

34. her full-time job

35. Jan Farmer's income, expenses, and savings, 2007–2011

36. 2008

37. 2011

38. 2008–2011

39. statistical

40. statistical

41. not

42. statistical

Data Analysis and Probability Answers

Final Test (Chapters 1–6), page 105

43. biased
44. biased
45. random
46. year 2
47. (5, 300)
48. positive

Final Test (Chapters 1–6), page 106

49. $\frac{1}{2}$

50.

	Donate	Not Donate	Total
Phone	32	38	70
Email	30	120	150
Total	62	158	220

51.

	Club	No Club	Total
Juniors	150	60	210
Seniors	70	120	190
Total	220	180	400

52. $\frac{7}{19}$

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