

Answers

Chapter 1

Lesson 1.1 (Part 1)

- 38,600
 - 80,240
 - 46,059
 - 20,012
 - 73,001
 - 13,513
 - seventy-three thousand, two hundred forty-six
 - eleven thousand, two hundred eighty
 - sixty thousand, fifty-four
 - nineteen thousand, seven hundred seven
 - fifty-five thousand, fifty-five
 - forty-eight thousand, three hundred
 - ninety thousand, nine hundred ninety
 - 69,500; 70,000
 - 62,000; 65,000
 - 57,000; 67,000
 - fifty; 8
 - thousand; 2
 - three; 6
 - forty; 0
- Accept all possible answers for Q21 and Q22.
- 86,037
 - 30,786
 - 30,678
 - 87,630
 - 30,678
 - 87,603
 - 40,529
 - 54,209
 - 20,459
 - 20,594
 - 94,205
 - 95,420

Lesson 1.1 (Part 2)

- thousands
- ones
- ten thousands
- tens
- hundreds
- 400
- 5
- 90,000
- 80
- 1,000
- 4
- 20
- 7
- 8
- thousands
- tens
- 90,000
- ones
- 6,000
- 7; 700
- 3; 4
- 7; 8; 6
- ten thousands; thousands; hundreds; 8
- 9 ten thousands; 8 hundreds; tens

- 20,000; 300; 20
- 7,000; 80
- 2,000; 600; 30
- 50,000; 6,000; 60
- 90,000; 9,000; 800; 50
- 89,346
- 3,421

Lesson 1.2

- $>$
- $<$
- $<$
- $>$
- 26,653
- 91,111
- 91,111
- 60,002
- 61,253; 61,352; 61,532
- 78,631; 78,061; 76,138
- 76,250
- 78,900
- 56,500
- 45,990
- 32,120
- 43,500
- 22,800
- 62,000
- 31,080; 31,280
Rule: Add 200.
- 58,700; 60,200
Rule: Add 1,500.
- 65,120; 65,720
Rule: Add 600 and then add 400.
- 22,000; 26,000
Rule: Multiply the difference between the last two numbers by 2. Then add the product to the last number.

Put on Your Thinking Cap!

Strategy: Logical reasoning

- 86,420
- 400
- 80,000

Thinking skill: Identifying patterns and relationships

Strategy: Look for patterns

- 45; 56
- 144; 121
- 72; 98; 128
- 6,650; 9,850
- 5,900; 6,650

Strategy: Logical reasoning

- 1,000
- 9,999
- 1,001
- 9,999
- 1,000
- 9,998
- 1,003
- 9,995
- 1,023
- 9,870

Chapter 2

Lesson 2.1

- 1,034; 1,000 or 900
- 10,985; 11,100 or 10,000
- 269; 200 or 300
- 17,975; 18,000
- 846; 900 or 600
- 595; 500
- 752; 800 or 400
- 19; 20
- 49; 50
- 29; 30

Item	Actual Cost	Rounded to the Nearest Hundred
microwave	\$ <u>450</u>	\$ <u>500</u>
toaster	\$ <u>80</u>	\$ <u>100</u>
oven	\$ <u>70</u>	\$ <u>100</u>
coffee machine	\$ <u>150</u>	\$ <u>200</u>

The microwave is about \$500 when rounded to the nearest hundred dollars.

The toaster is about \$100 when rounded to the nearest hundred dollars.

The oven is about \$100 when rounded to the nearest hundred dollars.

The coffee machine is about \$200 when rounded to the nearest hundred dollars.

$$\begin{aligned} & \$500 + \$100 + \$100 + \$200 \\ & = \$900; \text{ Yes} \end{aligned}$$

Lesson 2.2

- Yes
- No
- Yes
- No
- Yes
- Yes
- No
- Yes
- 1; 2; 3; 4; 6; 9; 12; 18; 36
- 1; 2; 3; 4; 5; 6; 10; 12; 15; 20; 30; 60
- 1; 2; 3; 4; 6; 12
- 12
- 1; 2; 3; 4; 6; 7; 12; 14; 21; 28; 42; 84
- 1; 2; 3; 4; 6; 8; 9; 12; 18; 24; 36; 72
- 1; 2; 3; 4; 6; 12
- 12
- 18; 24; 27; 30; 45
- 18; 24; 30
- 18; 24; 30
- 19, 37, 47
- 9, 15, 26, 33, 45
- 11, 13, 17, 19, 23, 29
- 21, 22, 24, 25, 26, 27, 28

Lesson 2.3

- 40
- 72
- 72
- 77
- 70
- 4; 8; 12; 16; 20; 24; 28; 32; 36; 40; 44; 48; 52; 56; 60; 64; 68; 72
- 9; 18; 27; 36; 45; 54; 63; 72
- 36; 72
- 36
- 6; 12; 18; 24; 30; 36; 42; 48
- 8; 16; 24; 32; 40; 48; 56; 64
- 24; 48
- 24
- 56
- 36
- 60
- 60
- 20; 48; 60; 72
- 48; 72
- 54; 72
- 72

Put on Your Thinking Cap!

- Thinking skill: Deduction
Strategy: Make a systematic list, Guess and check
The factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24.
The number is 12.
- Thinking skill: Deduction
Strategy: Guess and check
968
- Thinking skill: Deduction
Strategy: Make a systematic list

Now (Multiples of 4)	4	8	12	16	20	24
Next Year	5	9	13	17	21	25

Jane is 24 years old now.

More than one answer is possible.

- Thinking skill: Analyzing
Strategy: Guess and check

Number of Bicycles	Number of Tricycles	Total Number of Wheels
8	8	$16 + 24 = 40$
9	7	$18 + 21 = 39$
10	6	$20 + 18 = 38$

10 students are on bicycles.

- Thinking skill: Deduction
Strategy: Make a systematic list
Multiples of 7: 7; 14; 21; 28; 35; 42; 49
+ 5: 12; 19; 26; 33; 40; 47; 54
Multiples of 9: 9; 18; 27; 36; 45
+ 6: 15; 24; 33; 42; 51
Michelle has 33 baseball cards.

Thinking skill: Logical reasoning

Strategy: Guess and check

6. 12 January 7. 17 January

8. Thinking skill: Sequencing

Strategy: Make a systematic list

Adventure Books (\$4)	Soft Toys (\$6)	Games (\$8)
✓✓✓✓✓		
✓✓✓		✓
✓✓	✓✓	
✓		✓✓
	✓✓	✓

There are 5 different ways altogether.

Chapter 3

Lesson 3.1

1. 56; 5; 6 2. 5; 35; 3; 5

3. 6; 42; 4; 2 4. 2; 14; 1; 4

$$\begin{array}{r}
 2, 6 5 8 \\
 \times 7 \\
 \hline
 5 6 \\
 3 5 0 \\
 4, 2 0 0 \\
 1 4, 0 0 0 \\
 \hline
 1 8, 6 0 6
 \end{array}$$

6. 3,960 7. 3,592 8. 8,343

9. 4,965 10. 10,767 11. 16,068

12. 21,693 13. 34,741 14. 43,976

15. 33,852

Lesson 3.2

1. 480 2. 890

3. 4; 92; 920 4. 3; 105; 1,050

5. 5; 2,095; 20,950 6. 2; 1,254; 12,540

7. 6; 3,216; 32,160 8. 6; 3,888; 38,880

9. 609; 6,090 10. 672; 6,720

11. 2,848; 28,480 12. 2,403; 24,030

13. 90; 40; $90 \times 40 = 3,600$

14. 400; 50; $400 \times 50 = 20,000$

15. 7,448

16. 5,238

17. 10,556

18. 24,288

19. 11,760

20. 31,608

21. 63,124

22. 80,464

Lesson 3.3

$$\begin{array}{r}
 1 \\
 5 \overline{) 7 4 5} \\
 \underline{5 0 0} \\
 2 4 5 \\
 1 4 9 \\
 5 \overline{) 7 4 5} \\
 \underline{5 0 0} \\
 2 4 5 \\
 2 0 0 \\
 4 5 \\
 4 5 \\
 \hline
 0
 \end{array}$$

$$\begin{array}{r}
 1 \\
 6 \overline{) 9 8 4} \\
 \underline{6 0 0} \\
 3 8 4 \\
 1 6 4 \\
 6 \overline{) 9 8 4} \\
 \underline{6 0 0} \\
 3 8 4 \\
 3 6 0 \\
 2 4 \\
 2 4 \\
 \hline
 0
 \end{array}$$

3. 364 4. 245

5. 237 6. 186

7. 109 8. 139

9. 123 10. 106

Lesson 3.4

- 64; 8; 800
- 63; 7; 700
- 9; 3; 3000
- 80; 20
- 400; 80
- 7,500; 1,500
- 6,600; 1,100
- 1,263
- 1,013
- 284
- 562
- 497
- 968
- 249 R 5
1,748 is about 1,400.
 $1,400 \div 7 = 200$
The answer 249 R 5 is reasonable.
- 967 R 3
3,871 is about 3,600.
 $3,600 \div 4 = 900$
The answer 967 R 3 is reasonable.
- 376 R 6
3,014 is about 3,200.
 $3,200 \div 8 = 400$
The answer 376 R 6 is reasonable.
- 279 R 7
2,518 is about 2,700.
 $2,700 \div 9 = 300$
The answer 279 R 7 is reasonable.
- 605 R 8
5,453 is about 5,400.
 $5,400 \div 9 = 600$
The answer 605 R 8 is reasonable.
- 902 R 2
7,218 is about 7,200.
 $7,200 \div 8 = 900$
The answer 902 R 2 is reasonable.
- 928 R 3
6,499 is about 6,300.
 $6,300 \div 7 = 900$
The answer 928 R 3 is reasonable.
- 556 R 1
2,781 is about 3,000.
 $3,000 \div 5 = 600$
The answer 556 R 1 is reasonable.

Lesson 3.5

- $\$699 \times 38 = \$26,562$
He collects \$26,562.
- $369 \times 4 = 1,476$
1,476 blueberry muffins are sold every day.

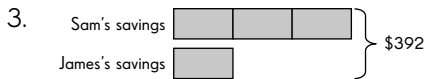
- $1,899 \times 7 = 13,293$
It produces 13,293 toy cars in 7 days.
- $3,438 \div 6 = 573$
Each group has 573 beads.
- $2,255 \div 6 = 375 \text{ R } 5$
 - Each post office receives 375 stamps.
 - 5 stamps are left over.
- $\$56 \times 39 = \$2,184$
A store has to pay \$2,184.
 - $\$72 \times 39 = \$2,808$
 $\$2,808 - \$2,184 = \$624$
The store makes a profit of \$624 on the in-line skates.
- $\$68 \times 25 = \$1,700$
 $\$1,700 + \$68 = \$1,768$
Hannah and her mother gave \$1,768 altogether to charity.
- $2,400 - 15 = 2,385$
 $2,385 \div 9 = 265$
There are 265 oranges in each box.
- $475 \times 4 = 1,900$
 $1,900 + 475 = 2,375$
2,375 people are at the theater altogether.
- $15 \times 37 = 555$
 $555 - 20 = 535$
535 fish are put into the aquarium.
- $\$3,650 - \$1,610 = \$2,040$
 $\$2,040 \div 3 = \680
Mr. Joseph puts \$680 aside for each of his other expenses.
- $1,543 + 932 = 2,475$
 $2,475 \div 9 = 275$
There is 275 milliliters of orange juice in each glass.

Put on Your Thinking Cap!

Thinking skill: Comparing

Strategy: Use a model

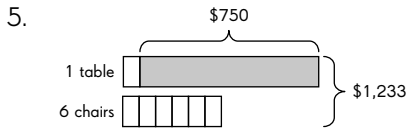
- $275 \times 3 = 825$
 $275 + 825 = 1,100$
 $1,100 - 156 = 944$ beads
There are 944 beads left.
- $420 - 90 = 330$
 $420 + 330 = 750$
 $750 \times 28 = 21,000$
The two factories produce 21,000 footballs in 28 days.



$$\begin{aligned} \$392 \div 4 &= \$98 \\ \$98 \times 3 &= \$294 \\ \$294 - \$38 &= \$256 \end{aligned}$$

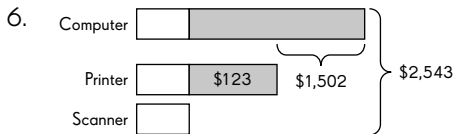
Sam has \$256 now.

4. $\$89 \times 6 = \534
 $\$534 + \$980 + \$1,800 = \$3,314$
 Mr. Roberts inherited \$3,314.



$$\begin{aligned} \$1,233 - \$750 &= \$483 \\ \$483 \div 7 &= \$69 \\ \$69 \times 6 &= \$414 \end{aligned}$$

Mrs. Rodin pays \$414 for the 6 chairs.



$$\begin{aligned} \$1,502 + \$123 &= \$1,625 \\ \text{The computer costs } \$1,625 \text{ more than the scanner.} \\ \$2,543 - \$1,625 - \$123 &= \$795 \\ \$795 \div 3 &= \$265 \\ \$265 + \$1,625 &= \$1,890 \end{aligned}$$

Ms. Rao pays \$1,890 for the computer.

7. Thinking skill: Logical reasoning
 Strategy: Guess and check
 a. Greatest possible product:
 $872 \times 94 = 81,968$
 b. Least possible product:
 $489 \times 27 = 13,203$
8. Strategy: Make a systematic list

Multiples of 7	21	28	35	42	49	56	63
+ 3	24	31	38	45	52	59	66

45 is a multiple of 5.
 Mr. Garcia is 42 years old now.
 $42 + 6 = 48$
 In 6 years, Mr. Garcia will be 48 years old.

9. Thinking skill: Analyzing parts and whole
 Strategy: Restate the problem
 2 bicycles have 4 wheels.
 $39 - 4 = 35$ wheels for the same number of bicycles and tricycles.

- a. A bicycle and a tricycle have a total of
 $2 + 3 = 5$ wheels
 $35 \div 5 = 7$ tricycles
 $7 + 2 = 9$ bicycles
 The club buys 9 bicycles.
- b. $\$49 \times 9 = \441
 The club pays \$441 for the bicycles.

Chapter 4

Lesson 4.1

1. Top Female Junior Sports Players

Name	Basketball Points	Baseball Runs
Maria	88	59
Jade	110	64
Judith	121	60
Stacy	88	57

2. Jade; 64 3. Maria; Stacy
 4. 7

5. Living Things

Snails	### ///
Worms	///
Ladybugs	### /
Butterflies	////

6. Number of Living Things

Snails	8
Worms	3
Ladybugs	6
Butterflies	4

7. 3 8. 10
 9. worms; ladybugs
 10. snails; butterflies or ladybugs; worms

11. Bread Loaves Sold

Whole grain bread	40
Raisin bread	55
Rye bread	30
Brown bread	40
White bread	65

12. 65 13. Whole grain; brown
 14. White; whole grain; brown
 15. Mystery books 16. Travel books
 17. $80 + 30 + 20 + 50 + 60 = 240$
 18. $60 + 80 = 140$ 19. $20 + 30 = 50$
 20. $80 - 20 = 60$

Lesson 4.2

1. B; 5 2. E; 5
 3. A; 4 4. D; 1
 5. Check that the correct cell is shaded.

Grade	Soccer	Badminton	Base-ball	Basket-ball
2	6	10	12	12
3	6	9	8	17
4	9	7	14	10
5	7	16	6	11
Total	28	42	40	50

6. Basketball 7. Soccer
 8. $17 - 11 = 6$ 9. 42 students
 10. $50 - 42 = 8$ 11. The second grade
 12. $40 - 28 = 12$

Lesson 4.3

1. June 2. March 3. April; May
 4. Taylor's savings between January and June increased.
 5. 9 A.M. 6. 12 P.M.
 7. Between 9 A.M. and 11 A.M.;
 $390 - 240 = 150$ falafels
 8. 50 9. 65
 10. 7 A.M. and 8 A.M. 11. 3 hours
 12. 55 patients 13. 70 patients
 14. Between 3:30 P.M. and 4 P.M.; 25 patients
 15. Between 6 P.M. and 7 P.M.; 25 patients

Put on Your Thinking Cap!

1. Bar graph. A bar graph is used to compare data using large numbers.
 2. Line graph. A line graph is used to show how data changes over time.
 3. Accept any correct answers.

Test Prep for Chapters 1 to 4

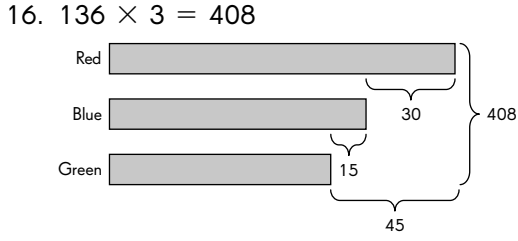
1. D 2. B 3. B 4. C
 5. C 6. C 7. D 8. C
 9. C 10. A
 11. sixty-seven thousand, ninety-eight
 12. 15 13. 1,500 14. 27,000
 15. 26,388; 27,888 16. \$139
 17. 54 ft 18. \$240 19. 42 20. \$69
 21. a. 460 meters
 b. Between 2 and 3 minutes
 22. 1 adult and 2 children;
 $\$5 + \$4 = \$9$
 $1,080 \div 9 = 120$
 120 adults are at the concert.
 23. $2 + 11 = 13$ students
 Since 11 more grapes are needed to give the students exactly 7 grapes each, adding 2 and 11 will give the exact number of students.
 a. Ms. Ervine has 13 students.
 $13 \times 6 = 78$
 $78 + 2 = 80$
 b. There are 80 grapes in the basket.

Chapter 5

Lesson 5.1

1. $12 + 10 + 8 + 14 = 44$
 2. $44 \div 4 = 11$ 3. 11
 4. $26 \text{ in.} + 28 \text{ in.} + 30 \text{ in.} + 32 \text{ in.} + 34 \text{ in.} = 150 \text{ in.}$
 5. $150 \div 5 = 30 \text{ in.}$ 6. 30
 7. 172 8. 700
 9. 810 10. 79
 11. Total age = $15 + 12 + 16 + 17 = 60$
 Average age = $60 \div 4 = 15$ years
 Alisha's age is the same as the average age.
 12. Jose and Matthew 13. Daniel
 14. $150 \times 3 = 450 \text{ cm}$
 $145 \times 2 = 290 \text{ cm}$
 $450 + 290 = 740 \text{ cm}$
 $740 \div 5 = 148 \text{ cm}$
 The mean height of the 5 students is 148 centimeters.

15. $1,896 \times 2 = 3,792$
 $3,792 + 2,736 = 6,528$
 $6,528 \div 3 = 2,176$
The average number of visitors is 2,176.



- $408 - 45 - 15 = 348$
 $348 \div 3 = 116$
There are 116 green beanbags in the store.

17. $264 \div 3 = 88$
 $88 + 1 = 89$ (Science)
 $89 + 5 = 94$ (Math)
 $89 + 94 = 183$
 $264 - 183 = 81$ (English)
Joleen's score in English is 81.

Lesson 5.2

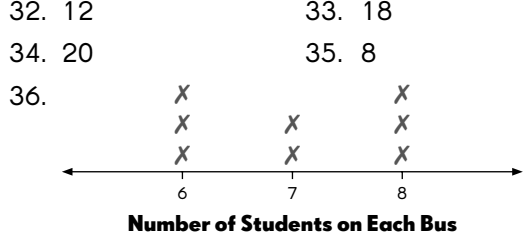
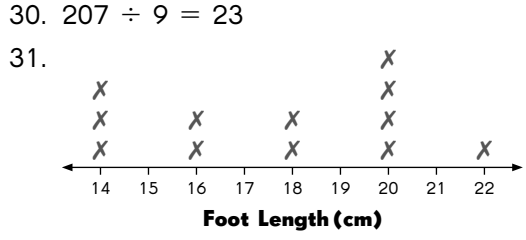
1. 3, 4, 4, 5, 7, 9, 10
2. 5
3. 4
4. $10 - 3 = 7$
5. $\frac{3 + 4 + 4 + 5 + 7 + 9 + 10}{7} = \frac{42}{7} = 6$
6. 12 ft, 15 ft, 16 ft, 16 ft, 18 ft, 19 ft
7. 16 ft
8. 16 ft
9. $19 - 12 = 7$ ft
10. $\frac{12 + 15 + 16 + 16 + 18 + 19}{6} = \frac{96}{6} = 16$ ft
11. 30 yd, 34 yd, 35 yd, 38 yd, 38 yd
12. 35 yd
13. 38 yd
14. $38 - 30 = 8$ yd
15. Mean = $\frac{30 + 34 + 35 + 38 + 38}{5} = \frac{175}{5} = 35$ yd
16. $30 - 10 = 20$
17. 15
18. 20

19. $10 \times 1 = 10$
 $15 \times 3 = 45$
 $20 \times 2 = 40$
 $25 \times 1 = 25$
 $30 \times 2 = 60$
Total time = $10 + 45 + 40 + 25 + 60 = 180$
Mean = $\frac{180}{9} = 20$

20. **Goals Scored**

Number of Goals	0	1	2	4	5	6
Number of Players	5	9	6	3	5	2

21. 30 22. 2 23. 1
24. $0 \times 5 = 0$
 $1 \times 9 = 9$
 $2 \times 6 = 12$
 $4 \times 3 = 12$
 $5 \times 5 = 25$
 $6 \times 2 = 12$
 $0 + 9 + 12 + 12 + 25 + 12 = 70$
25. 9 26. 24
27. 24 28. $25 - 20 = 5$
29. $20 \times 2 = 40$
 $23 \times 2 = 46$
 $24 \times 4 = 96$
 $25 \times 1 = 25$
 $40 + 46 + 96 + 25 = 207$



37. 7 38. 6 and 8
39. 2
40. Total number of students = $18 + 14 + 24 = 56$
Mean = $56 \div 8 = 7$

Lesson 5.3

- 35
- 30
- 31
- 59
- 45
- $\frac{34 + 42}{2} = \frac{76}{2} = 38$
- $59 - 24 = 35$
- 59
- Total height = $24 + 30 + 33 + 34 + 42 + 45 + 45 + 59 = 312$
Mean = $\frac{312}{8} = 39$
- \$275
- \$275
- $\$309 - \$205 = \$104$
- \$205
- Total = $\$205 + \$264 + \$268 + \$275 + \$275 + \$276 + \$284 + \$292 + \$309 = \$2,448$
Mean = $\frac{\$2,448}{9} = \272

15.

Number of Dogs Walked	
Stem	Leaves
1	0
2	5 5 6 7 8 8
3	2 3

$$1 \mid 0 = 10$$

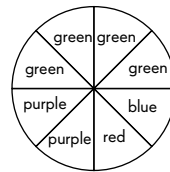
- 25; 28
- 27
- $33 - 10 = 23$
- Total = $10 + 25 + 25 + 26 + 27 + 28 + 28 + 32 + 33 = 234$
Average = $\frac{234}{9} = 26$
- 7

Lesson 5.4

- less likely
- certain
- more likely
- impossible
- certain
- Answers vary.
- impossible
- certain
- equally likely
- certain
- 2
- 6
- 8
- less likely
- impossible
- equally likely
- impossible

Lesson 5.5

- a. 2 b. 6 c. $\frac{2}{6} = \frac{1}{3}$
- $\frac{1}{6}$
- $\frac{3}{6} = \frac{1}{2}$
- $\frac{4}{6} = \frac{2}{3}$
- $\frac{6}{6} = 1$
- $\frac{1}{10}$; less likely
- $\frac{2}{10} = \frac{1}{5}$; less likely
- $\frac{3}{10}$; less likely
- $\frac{9}{10}$; more likely
- $\frac{5}{12}$
- $\frac{6}{12} = \frac{1}{2}$
- $\frac{9}{12} = \frac{3}{4}$
- $\frac{6}{12} = \frac{1}{2}$
- $\frac{3}{12} = \frac{1}{4}$
- $\frac{9}{12} = \frac{3}{4}$
- $\frac{3}{12} = \frac{1}{4}$
- $\frac{2}{8} = \frac{1}{4}$



- $\frac{4}{8} = \frac{1}{2}$
- $\frac{2}{8} = \frac{1}{4}$
- $\frac{0}{8} = 0$

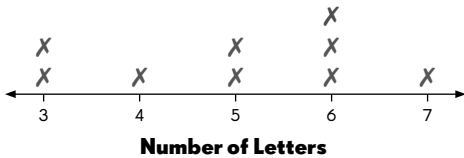
Lesson 5.6

- $4 \times 16 = 64$
 $20 + 8 = 28$
 $64 - 28 = 36$
Tony and Miguel scored 36 points altogether.
- $196 - 88 = 108$
 $\frac{108}{2} = 54$
The mean weight of the other 2 dolphins is 54 pounds.
- $A + D + C = 52 \times 3 = 156$
 $A + D = 61 \times 2 = 122$
 $D + C = 44 \times 2 = 88$
 $C = 156 - 122 = 34$ snacks (Calvin)
 $D = 88 - 34 = 54$ snacks (Dakota)
 $A = 156 - 88 = 68$ snacks (Adrian)
- $100 \times 76 - 100 \times 70 = 600$
 $600 \div (80 - 70) = 60$ (boys)
 $100 - 60 = 40$ (girls)
40 girls took the quiz.

5. **Number of Letters**

Name	Number of Letters
Jessica	7
Brenda	6
Carl	4
Fiona	5
Jeremy	6
Barry	5
Nicole	6
Zoe	3
Ann	3

a.



b. 6

c. $7 - 3 = 4$

d. Mean

$$= \frac{3 + 3 + 4 + 5 + 5 + 6 + 6 + 6 + 7}{9}$$

$$= \frac{45}{9} = 5$$

e. This will change the range and mean since there are 9 letters in *Annemarie*.

Only the mode will remain constant.

6. 87

7. $\frac{81 + 87}{2} = \frac{168}{2} = 84$

8. $98 - 46 = 52$

9. $\frac{46 + 54 + 63 + 81 + 87 + 87 + 92 + 98}{8}$

$$= \frac{608}{8} = 76$$

10. $76 \times 9 = 684$

$684 - 608 = 76$

The new player scores 76.

11. Total number of students = 20

The probability of a girl leaving = $\frac{3}{5} = \frac{12}{20}$

There are 12 girls.

12. a. Total number of crayons = $3 + 2 + 4 + 3 = 12$

The probability of drawing a yellow crayon

$$= \frac{4}{12} = \frac{1}{3}$$

b. Number of red and green crayons

$$= 3 + 3 = 6$$

The probability of drawing a red or green

$$\text{crayon} = \frac{6}{12} = \frac{1}{2}$$

13. $\frac{\text{Number of buses}}{\text{Number of vehicles left}} = \frac{4}{19}$

14.

Math	Science
------	---------

Total math and science score = $74 \times 2 = 148$

Math	English
------	---------

Total math and English score = $83 \times 2 = 166$

$166 - 148 = 18$

She scored 18 more points in English than in science.

Put on Your Thinking Cap!

1. $147 \times 5 = 735$

$217 \times 2 = 434$

$735 + 434 = 1,169$

$1,169 \div 7 = 167$

He sells an average of 167 on newspapers on each day of the week.

2. $78 \times 3 = 234$

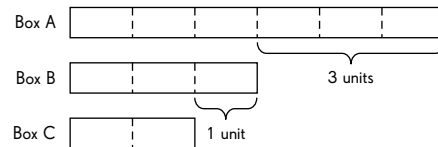
$82 \times 4 = 328$

$328 - 234 = 94$

She will need to score 94 points to have an average score of 82 points.

3. Thinking skill: Comparing

Strategy: Use a model



$11 \text{ units} \rightarrow 88 \times 3 = 264$

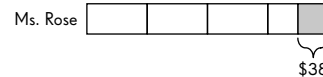
$1 \text{ unit} \rightarrow 24$

$24 \times 6 = 144$

There are 144 paper clips in Box A.

4. Mr. Clarkson

	\$73
--	------



$5 \text{ units} \rightarrow \$180 \times 2 + \$38 - \$73 = \$325$

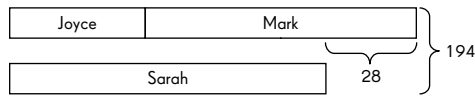
$1 \text{ unit} \rightarrow \65

$\$65 + \$73 = \$138$

$\$65 \times 4 - \$38 = \$222$

Mr. Clarkson had \$138 and Ms. Rose had \$222 at first.

5. $68 \times 4 - 78 = 194$
Joyce, Mark, and Sarah have a total of 194 key chains.



$$\text{Sarah} \rightarrow \frac{194 - 28}{2} = 83$$

$$\text{Joyce} \rightarrow \frac{83 + 28}{3} = 37$$

$$\text{Mark} \rightarrow 37 \times 2 = 74$$

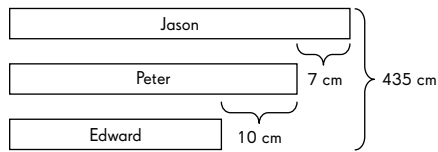
Mark has 74 key chains.

6. With a difference of $(9 + 3) = 12$ points, the average score decreased by $(81 - 78) = 3$ points.

$$12 \div 3 = 4$$

There were 4 students in the group.

7. $145 \times 3 = 435$



$$435 - 17 - 10 = 408$$

$$408 \div 3 = 136 \text{ cm (Edward's height)}$$

$$136 + 10 = 146 \text{ cm (Peter's height)}$$

$$146 + 7 = 153 \text{ cm (Jason's height)}$$

Chapter 6

Lesson 6.1

- $\frac{1}{9} + \frac{6}{9} = \frac{7}{9}; \frac{6}{9}; \frac{6}{9}$
- $\frac{3}{6} + \frac{1}{6} = \frac{4}{6} = \frac{2}{3}; \frac{3}{6}; \frac{3}{6}$
- $\frac{4}{10} + \frac{1}{10} = \frac{5}{10} = \frac{1}{2}$
- $\frac{8}{12} + \frac{2}{12} = \frac{10}{12} = \frac{5}{6}$
- $\frac{3}{12} + \frac{1}{12} = \frac{4}{12} = \frac{1}{3}$
- $\frac{7}{12}$ 7. $\frac{1}{2}$ 8. $\frac{2}{3}$
- $\frac{7}{8}$ 10. $\frac{7}{9}$

Lesson 6.2

- $\frac{5}{6} - \frac{3}{6} = \frac{2}{6} = \frac{1}{3}; \frac{3}{6}; \frac{3}{6}$

$$2. \frac{7}{12} - \frac{4}{12} = \frac{3}{12} = \frac{1}{4}; \frac{4}{12}; \frac{4}{12}$$

$$3. \frac{9}{12} - \frac{5}{12} = \frac{4}{12} = \frac{1}{3}$$

$$4. \frac{8}{10} - \frac{3}{10} = \frac{5}{10} = \frac{1}{2}$$

$$5. \frac{2}{12}; \frac{1}{6} \qquad 6. \frac{2}{16}; \frac{1}{8}$$

$$7. \frac{1}{2} \qquad 8. \frac{1}{12} \qquad 9. \frac{1}{10} \qquad 10. \frac{1}{8}$$

Lesson 6.3

- $1\frac{5}{6}$ 2. $3\frac{3}{8}$
- $2\frac{4}{7}$ 4. $5\frac{7}{9}$
- $2; 3; 2\frac{3}{4}$ 6. $4; 5; 4\frac{5}{6}$
- $3; 2; 3\frac{2}{3}$ 8. $1\frac{3}{5} \text{ L}$
- $2\frac{1}{4} \text{ lb}$ 10. $2\frac{3}{5}$
- $4\frac{5}{8}$ 12. $3\frac{4}{9}$
- $5\frac{7}{12}$ 14. $2\frac{1}{6}$
- $4\frac{3}{10}$ 16. $2\frac{3}{4}$
- $1\frac{2}{5}$ 18. $4\frac{1}{3}$
- $3\frac{3}{4}$ 20. $\frac{2}{5}; 1\frac{1}{5}; 1\frac{4}{5}; 2\frac{3}{5}$
- $\frac{1}{2}; \frac{7}{8}; 1\frac{3}{4}; 2\frac{1}{8}; 2\frac{3}{4}$ 22. $4\frac{1}{2}; 6\frac{1}{4}; 7\frac{1}{2}$
- $5\frac{1}{2}; 6\frac{2}{3}; 7\frac{1}{6}; 7\frac{5}{6}$

Lesson 6.4

- a. 7 b. 3 c. 10 d. $\frac{10}{7}$
- a. 16 b. 3 c. 19 d. $\frac{19}{8}$
- a. 9 b. 2 c. 11 d. $\frac{11}{3}$
- $\frac{8}{5}$ 5. $\frac{14}{3}$
- $\frac{13}{2}$ 7. $2\frac{3}{5}; \frac{13}{5}$
- $1\frac{5}{6}; \frac{11}{6}$ 9. $3\frac{7}{8}; \frac{31}{8}$
- $5\frac{3}{4}; \frac{23}{4}$ 11. $2\frac{4}{9}; \frac{22}{9}$
- $2\frac{1}{5}; \frac{11}{5}$ 13. $2\frac{3}{10}; \frac{23}{10}$

14. $3\frac{5}{8}; \frac{29}{8}$
 16. $\frac{5}{3}; \frac{7}{3}; \frac{8}{3}$
 18. $\frac{11}{3}; \frac{13}{3}; \frac{29}{6}$
 20. $\frac{21}{5}; \frac{26}{5}; \frac{29}{5}$
 22. $\frac{17}{15}; \frac{9}{5}; \frac{7}{3}$

Lesson 6.5

- | | | | |
|---------------------------------|--------------------------------|---------------------|---------------------|
| 1. 1; 1 | 2. 2; 2 | | |
| 3. 12; 1; 1; 1 | 4. 20; 3; 3; 3 | | |
| 5. 20; 7; 2; 7; $2\frac{7}{10}$ | 6. 21; 5; 3; 5; $3\frac{5}{7}$ | | |
| 7. $4; 2\frac{2}{3}$ | 8. $4; 2\frac{1}{2}$ | | |
| 9. $7\frac{1}{2}$ | 10. $1\frac{4}{5}$ | 11. $2\frac{1}{3}$ | 12. $1\frac{1}{4}$ |
| 13. $3\frac{1}{7}$ | 14. 6 | 15. $7\frac{1}{2}$ | 16. $8\frac{2}{5}$ |
| 17. $2\frac{2}{13}$ | 18. $3\frac{1}{5}$ | 19. 9; 11 | 20. 4; 5 |
| 21. 10; 13 | 22. 12; 17 | | |
| 23. 14; 4; 18 | 24. 18; 2; 20 | | |
| 25. $\frac{13}{3}$ | 26. $\frac{23}{10}$ | 27. $\frac{9}{7}$ | 28. $\frac{14}{9}$ |
| 29. $\frac{9}{4}$ | 30. $\frac{29}{12}$ | 31. $\frac{13}{10}$ | 32. $\frac{13}{11}$ |
| 33. $\frac{29}{5}$ | 34. $\frac{35}{9}$ | 35. $\frac{31}{5}$ | 36. $\frac{51}{7}$ |

Lesson 6.6

- | | | | |
|---------------------|---------------------|---------------------|--------------------|
| 1. $1\frac{2}{9}$ | 2. $1\frac{2}{3}$ | 3. $1\frac{3}{8}$ | 4. $\frac{5}{6}$ |
| 5. $1\frac{1}{2}$ | 6. $1\frac{1}{12}$ | 7. $1\frac{5}{12}$ | 8. $1\frac{1}{2}$ |
| 9. $1\frac{7}{12}$ | 10. $1\frac{5}{8}$ | 11. $2\frac{5}{12}$ | 12. $3\frac{1}{9}$ |
| 13. $1\frac{1}{5}$ | 14. $4\frac{1}{3}$ | 15. $2\frac{1}{2}$ | 16. $3\frac{1}{4}$ |
| 17. $5\frac{3}{10}$ | 18. $2\frac{5}{14}$ | 19. $1\frac{5}{12}$ | 20. $4\frac{1}{9}$ |

Lesson 6.7

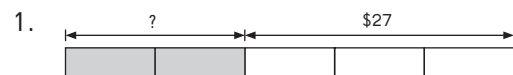
- | | | | |
|------------------|------------------|------------------|------------------|
| 1. $\frac{2}{3}$ | 2. $\frac{3}{5}$ | 3. $\frac{1}{3}$ | 4. $\frac{1}{3}$ |
| 5. 30, 6, 24, 24 | 6. 40 | 7. 25 | |
| 8. 30 | 9. 16 | 10. 10 | 11. 12 |

Lesson 6.8

1. $90 - 40 - 20 = 30$
 $\frac{30}{90} = \frac{1}{3}$
 Arthur is left with $\frac{1}{3}$ of his money.
2. $1 - \frac{3}{4} = \frac{1}{4}$
 $\frac{1}{4} \times 20 = 5$
 The baker is left with 5 pounds of sugar.
3. a. $\frac{6}{10} = \frac{3}{5}$ of the fish are goldfish.
 b. Total number of fish = $10 + 2 = 12$
 $\frac{4}{12} = \frac{1}{3}$ of the fish are angelfish.
4. $\frac{3}{10} + \frac{2}{5} = \frac{7}{10}$
 $\frac{7}{10}$ of her savings is spent.
5. $\frac{1}{2} + \frac{1}{8} = \frac{5}{8}$
 $1 - \frac{5}{8} = \frac{3}{8}$
 $\frac{3}{8}$ of the vehicles are neither cars nor motorcycles.
6. $6 + \frac{3}{10} = 6\frac{3}{10}$ meters
 Rajon's plant grows $6\frac{3}{10}$ meters high.
7. $\frac{2}{5}$ of 10 = 4
 $\frac{1}{3} \times 4 = \frac{4}{3} = 1\frac{1}{3}$
 4 packets of turkey ham weigh $1\frac{1}{3}$ pounds.
8. $\frac{6}{4} \times 12 = 18$
 $\frac{1}{2} \times 18 = 9$
 Carla spends 9 hours lifting weights during the 12 days.

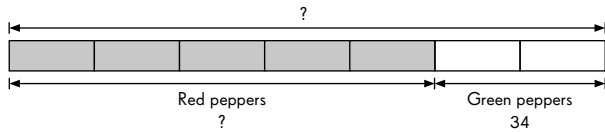
Put on Your Thinking Cap!

Thinking skill: Analyzing parts and whole
 Strategy: Use a model



- 3 units → \$27
 1 unit → $\$27 \div 3 = \9
 2 units → $\$9 \times 2 = \18
 Justin pays \$18 for the shirt.

2.



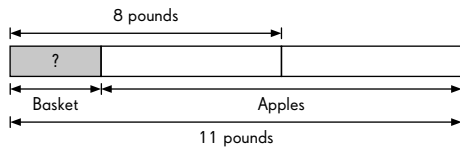
2 units → 34

1 unit → $34 \div 2 = 17$

7 units → $17 \times 7 = 119$

The chef has 119 peppers altogether.

3.



1 unit of apples → $11 - 8 = 3$

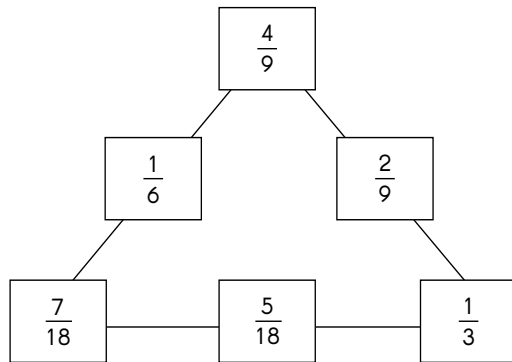
$8 - 3 = 5$

The weight of the empty basket is 5 pounds.

4. Thinking skill: Analyzing parts and whole
Strategy: Guess and check

Answers vary.

One possible answer:



Mid-Year Test

- | | | | |
|-------------------|-----------|-------------------|-------|
| 1. C | 2. D | 3. B | 4. C |
| 5. B | 6. B | 7. C | 8. D |
| 9. D | 10. A | 11. B | 12. D |
| 13. B | 14. C | 15. B | 16. A |
| 17. D | 18. C | 19. B | 20. C |
| 21. 1 | | 22. 371 | |
| 23. 10,283 | | 24. 69; 138 | |
| 25. $\frac{1}{2}$ | | 26. 27 cm; 156 cm | |
| 27. $\frac{2}{3}$ | 28. 4 ft. | 29. 19,256 | |
| 30. 66,150 | 31. 78 | 32. 1,549 | |

33. Saturday 34. 5,800

35. $900 - 800 = 100$

36. $1\frac{1}{6}$ liters 37. $\frac{4}{9}$

38. 3 units → 1,482

1 unit → 494

5 units → $494 \times 5 = 2,470$

There are 2,470 students in the school.

39. $200 + 100 = 300$

Sakina and Alisha receive 300 tacos altogether.

40. $\$0.50 + \$0.50 + \$1 = \2

$\$36 \div \$2 = 18$

$18 \times 2 = 36$

There are 36 50¢ coins in the bag.

41. $920 - 580 = 340$

$340 \div 2 = 170$

170 plums are transferred from Basket A to Basket B.

42. $\$3,328 \div 2 = \$1,664$



$\$1,664 \div 4 = \416

a. Each printer costs \$416.

$\$1,664 - \$416 = \$1,248$

b. Each computer costs \$1,248.

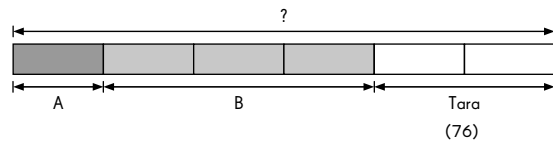
43. $\frac{8}{9} \times 1,080 = 960$

$960 \div 10 = 96$

$96 \times \$2 = \192

Mr. Carlos collects \$192 from the sale of apple.

44.



2 units → 76

1 unit → $76 \div 2 = 38$

6 units → $38 \times 6 = 228$

They collected 228 seashells in all.

45. $45 - 9 = 36$

$\frac{36}{3} \times 4 = 48$

$48 - 8 = 40$

$\frac{40}{2} \times 3 = 60$

60 passengers started the trip from the first bus stop.