

ANSWERS TO EXERCISES AND ASSESSMENTS

CHAPTER 1

Exercises 1.1

1. a) 100 b) 10 c) 100 d) 10 2. a) 10
b) 10 c) 10 d) 10 3. a) 100 b) 1,000
c) 10 d) 100

4.

10 times the number	Number	1/10 of the number
300	30	3
7000	700	70
800	80	8
90,000	9,000	900
500,000	50,000	5,000
40,000	4,000	400

5. a)

ones		tenths	hundredths	thousandths
8	.	0	0	0

b)

ones		tenths	hundredths	thousandths
0	.	0	2	0

c)

ones		tenths	hundredths	thousandths
0	.	1	0	0

d)

ones		tenths	hundredths	thousandths
0	.	0	0	4

6. a) 10 b) 1000 c) 10 d) 100 e) 10

7. a) 10 b) 100 c) 1000 d) 100 e) 10

f) 10

8.

10 times the number	Number	1/10 of the number
6	0.6	0.06
70	7	0.7
0.3	0.03	0.003
40	4	0.4
2	0.2	0.02
0.1	0.01	0.001

9. a) 100 b) 10 c) 100 d) 1000 e) 100
f) 10

Exercises 1.2

1. a) 1,000 b) 100,000 c) 10,000,000,000
d) 10,000,000 2. a) 10^2 , 100, 10 to the
second power b) 10^4 , 10,000, 10 to the
fourth power c) 10^3 , 1,000, 10 cubed
3. a) 1,000 b) 500 c) 20,000

Exercises 1.3

1. a) 50 b) 0.2 c) 300 d) 0.003 e) 0.02
f) 0.9 2. a) 453 b) 2,307 c) 7,908.506
d) 60,200.3 3. a) twenty-five thousand,
forty b) forty-five and one hundred eleven
thousandths c) sixty-two thousand, three
hundred five d) two hundred fifty and
thirteen thousandths e) seventy thousand,
twenty-seven f) two thousand, three
hundred and five hundred eight
thousandths 4. a) 25,209 b) 12,648
c) 33,310 d) 60,045 e) 350.029
f) 45.045 5. a) 0 b) 5 c) 6 d) 7 e) 2
f) 0 g) 3

Exercises 1.4

1. a) $5,000 + 600 + 40 + 2$
b) $4,000 + 50 + 9$ c) $20,000 + 4,000 + 40$
d) $30 + 4 + 0.7 + 0.04$
e) $700 + 90 + 3 + 0.9$
f) $4,000 + 500 + 20 + 2 + 0.7 + 0.04$
g) $40,000 + 200 + 50$
h) $300 + 80 + 0.8 + 0.003$

- i) $3,000 + 20 + 2 + 0.5$
 j) $10 + 2 + 0.09 + 0.006$
 k) $900 + 20 + 4 + 0.7 + 0.09$

Exercises 1.5

1. > 2. < 3. < 4. < 5. < 6. > 7. >
 8. < 9. > 10. > 11. 3.453 12. 5.76
 13. 21.33 14. 9.903 15. 6.2 16. 2.01
 17. 6.001 18. 4.407 19. \$12.58 20. cat
 21. Parcel

Exercises 1.6

1. a) $16.53 > 16.5 > 15.6$
 b) $3.330 > 3.303 > 3.03$
 c) $8.998 > 8.99 > 8.909$
 d) $50.5 > 50.05 > 50.045$
 2. a) $1.56 < 1.65 < 12.69$
 b) $1.03 < 1.037 < 1.34$
 c) $4.411 < 4.412 < 4.42$
 d) $7.32 < 7.328 < 7.8$ 3. a) Mila
 b) $2.45 > 2.459 > 2.471$

Exercises 1.7

1. 0.3 2. 2.08 3. 5.3 4. 6.24 5. 4
 6. 12.2 7. 345.07 8. 45.39 9. 1,000.8
 10. 566 11. a) 3.85 b) 3.9 12. a) 563
 b) 562.96 13. 4, 3.9, 3.93 14. 6, 6.2, 6.18
 15. 4, 4, 4.02 16. 6, 5.7, 5.69 17. 8, 8.2,
 8.17 18. 8, 7.9, 7.93

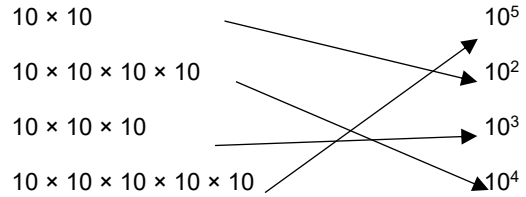
Self-Assessment – Chapter 1

1.

10 times the number	Number	1/10 of the number
2,000	200	20
60,000	6,000	600
700	70	7
4	0.4	0.04
0.3	0.03	0.003
50	5	0.5

2. a) T b) F c) F d) F e) F f) T
 3. a) 10 b) 1,000 c) 1,000 d) 1,000

4.



5. No, $6 \times 10^3 = 6 \times 1,000 = 6,000$
 6. a) 700 b) 0.02 c) 0.03 d) 0.002 7. C
 8. B & C 9. 4.79 10. 32.859 11. \$19.95
 12. a) 16.1 b) 16.1

Performance Task – Chapter 1

1. 23,672.731 2. 3 3. 23,673
 4. 3 5. $20,000 + 3,000 + 600 + 70 + 2 + 0.7 + 0.03 + 0.001$ 6. 3,481.83, 45.938,
 19,630.003, 23,762.729, 3.692, 5,621.83

CHAPTER 2

Exercises 2.1

1. 7, 23, 5, 3, 11, 13 2. It has more than two factors 3. Answers may vary. Example: 3×3 4. Answers may vary. Example: 3×5 5. Answers may vary. Example: $2 \times 2 \times 2 \times 2$ 6. Answers may vary. Example: $3 \times 3 \times 2$ 7. No, the number 6 is not prime. $30 = 2 \times 3 \times 5$

Exercises 2.2

1. a) 1,200 b) 33,000 c) 5,000 d) 90,000
 e) 100,000 f) 36,000 2. 1,200
 3. About 2,200 miles 4. 1,000 5. 250

Exercises 2.3

1. a) 4,131 b) 21,889 c) 63,072
 2. a) 32,798 b) 12,222 c) 27,702
 3. 4,860 litres 4. 8,760 blocks
 5. 19,096 pounds 6. 4,140 snacks

Exercises 2.4

1. a) 1,386,537 b) 3,956,967
 c) 10,703,286 d) 9,040,876
 e) 12,699,102 2. 8,924,250 miles
 3. \$18,788,000 4. \$4,606,300

Answers

Exercises 2.5

1. a) 65 R10 b) 123 R1 c) 277 R17
d) 539 2. 621 copies 3. 410 boxes with
12 pencils leftover 4. 409 plants
5. 301 memberships 6. 276 balls

Exercises 2.6

1. a) 38 b) 52 R4 c) 149 d) 351
2. \$878 3. 462 bags 4. 406 seats per
section with 4 seats leftover 5. 321 boxes
6. 113 trees per row with 7 trees leftover

Exercises 2.7

1. a) 137 R2 b) 85 c) 674 d) 264
2. 482 miles 3. 273 boxes with 24 pencils
leftover 4. 500 tickets

Self-Assessment – Chapter 2

1. No, it has more than 2 factors.
2. No, 4 is not a prime number.
3. 900 miles 4. 1,753,166 5. 7,830 eggs
6. José is correct. 7. 249 8. 308 R4
9. \$56

Performance Task – Chapter 2

1. 346 books 2. \$2,100 3. \$1,275
4.

Item	Cost
Books	\$4,498
Tables and Chairs	\$2,100
Computers	\$1,275
Paint	\$548
New carpet	\$2,530
New lighting	\$3,954
TOTAL	\$14,905.00

5. \$2,030 6. 170 tickets

CHAPTER 3

Exercises 3.1

1. a) 9 b) 14 c) 17 d) 17 2. a) 2 b) 8.1
c) 7.2 d) 27.8 3. a) 12 b) 22 c) 10

- d) 87 4. a) 4 b) 8 c) 12 d) 11
5. About \$17.80 6. About \$27.50

Exercises 3.2

1. a) 0.88 b) 0.91 2. a) 0.5 b) 0.6
c) 0.3 d) 7.37 e) 3.87 f) 10.23
3. a) 159.32 b) 0.9 c) 0.61 d) 17.27
e) 81.6 f) 192.8 g) 10.4 h) 96.3
4. \$12.60 5. 24.25 miles

Exercises 3.3

1. a) 0.42 b) 0.43 c) 0.89 d) 3.31
2. a) 12.06 b) 24.9 c) 16.3 d) 33.8
e) 22.3 f) 2.17 g) 181.94 h) 106.09
i) 64.07 j) 710.9 3. 7.9 inches 4. 7.7 cm
5. 4.8 m

Exercises 3.4

1. a) 0.16 b) 0.2 c) 0.14 d) 0.18
2. a) 28.18 b) 105.924 c) 113.373
d) 217.287 e) 94.514 f) 329.289
3. 758 pounds 4. 543.6 peanuts
5. \$196.69

Exercises 3.5

1. a) 4.5 b) 3.2 c) 1.75 d) 1.1 e) 6.5
f) 2.5 2. a) 0.9 b) 8.54 c) 2.51 d) 0.7
e) 4.4 f) 2.5 3. a) 15.1 b) 7.1 c) 6.1
d) 3.43 e) 4.63 f) 5.18 4. 11.19 cm
5. 21.3 pounds 6. \$3.95

Self-Assessment – Chapter 3

1. a) 0.89 b) 691.64 2. a) 0.47 b) 273.13
3. a) 0.35 b) 433.0872 4. 1.8 5. 4.73
6. 0.2 m 7. 27.2 miles 8. \$23.25
9. \$21.39

Performance Task – Chapter 3

1. \$81.06 2. \$2,081.06 3. \$221.25
4. About \$2.95 per pack

CHAPTER 4

Exercises 4.1

1. a) 33 b) 48 c) Parentheses first
2. a) 34 b) 52 c) 31 d) 30 e) 3 f) 5

3. a) 82 b) 9 c) 9 d) 37 e) 19 f) 36
 4. a) 81 b) 27 c) 16 5. a) 11 b) 5 c) 3
 d) 28 e) 28 f) 20

Exercises 4.2

1. a) 4.7 b) 12.5 c) 6.8 d) 19.8 e) 10.2
 f) 3.3 2. a) 1.68 b) 7 c) 29.6 d) 1.5
 e) 9.7 f) 13.35 g) 4.88 h) 1.6 3. a) 0.2
 b) 4 c) 2 d) 1.8 e) 0.7 f) 9.6 g) 24.96
 h) 1 4. a) 10.9 b) 12.35 c) 3.5 d) 3.5
 e) 3.8 f) 7.8 g) 5.2 h) 2

Exercises 4.3

1. a) $(9 + 5) \div 2$ b) $(7 \times 4) \div 14$
 c) $(5 + 13) \div 18$ d) $(7 - 5) + 15$
 e) $(15 \div 5) \times 9$ f) $(14 + 7) \times 5$
 2. a) Faranze: 3, Liza: 9 b) Faranze; The
 parentheses make sure that 9 and 3 are
 added first before subtracting from 15.
 3. a) $(12 + 5) \times (9 - 2) = 119$
 b) $(15 - 6) \div (1 + 2) = 3$
 4. a) 9 b) 6 c) 80 d) 17 e) 21

Exercises 4.4

1. a) Begin with 3 and add 5 each time
 b) Begin with 20 and add 10 each time
 c) Begin with 7 and add 3 each time
 d) Begin with 20 and add 11 each time
 2. a) Begin with 3 and multiply by 2 each
 time. b) Begin with 80 and divide by 2
 each time. c) Begin with 2 and multiply by
 2 each time. d) Begin with 2 and multiply
 by 2 and add 1 each time.
 3. a) 10, 8, 6 b) 729, 2,187, 6,561
 4. a) 28, 25, 22, 19, 16, 13
 b) 400, 200, 100, 50, 25, 12.5
 c) 19, 36, 53, 70, 87, 104
 d) 6, 6, 6, 6, 6, 6
 5. a) Yes b) No, the pattern does not begin
 with 24. c) No, $10 \times 2 = 20$

Exercises 4.5

1. a) increases by 4, 25 b) decreases by 2,
 18 2. a) Decreases by 3, 17 b) increases
 by 3, 23

3.

a)

p	$p + 11$
1	12
2	13
3	14

4.

m	$3 \times m - 1$
1	2
2	5
3	8
4	11
5	14
6	17

b)

m	$2m$
1	2
2	4
3	6

5.

x	$2 \times x + 4$
1	6
2	8
3	10
4	12
5	14
6	16

6. a) 2, 9, 16 b) 23, 30, 37

Exercises 4.6

1. a) $3 + 4 = n$ b) $6 - n = 2$
 2. a) $27 + n = 50$ b) $n + 27 = 50$
 c) The terms are the same.
 3. a) $n - 7 = 20$ b) $3 \times n = 30$
 c) $8 + n = 36$ d) $n \div 11 = 121$
 4. $2 \times 5 + 5 + m = 19$ 5. $6 \times t + 2 = 80$

Exercises 4.7

1. a) A number plus twenty-five equals forty.
 b) Three times a number equals twenty-one
 c) Thirty-two minus a number equals fifty.
 d) A number minus ten equals thirty.
 e) Fifteen divided by a number equals five.
 2. a) Six plus six times a number equals
 fifty-four. $n = 8$ b) Two times a number
 minus four equals fifty-six. $m = 30$
 c) Fifteen plus seven times a number
 equals forty-three. $p = 4$ d) Four times a
 number minus nineteen equals thirty-three.
 $a = 13$ e) Four times a number plus
 thirteen equals twenty-seven. $d = 3.5$
 3. Answers will vary.

Self-Assessment – Chapter 4

1. a) 11 b) 15 c) 31 d) 9 e) 17 f) 605
 g) 118 h) 10 i) 25 j) 3 2. a) 9.9 b) 6
 c) 2 d) 7.4 e) 7.5 f) 6.6
 3. a) need to do multiplication first
 b) need to do division first

Answers

4. a) 41, 46, 51 b) 243, 729, 2,187
 5. a) $n - 7 = 41$ b) $5 \times n = 50$
 c) $3 \times n - 9 = 42$ 6. a) A number minus fifteen equals forty. b) Twenty-five plus five times a number equals thirty. c) Three times a number plus twelve equals twenty-one. d) Twelve plus four times a number minus eight equals ten.

Performance Task – Chapter 4

A)

Samir's Age	Amount Deposited	Total Amount in Account
1	150	150
2	200	350
3	250	600
4	300	900

B) 1,000 C) 10,350

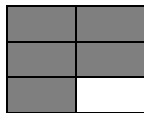
CHAPTER 5

Exercises 5.1

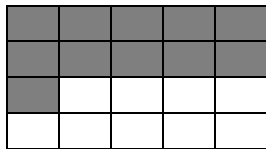
1. a) $\frac{1}{4}$ b) $\frac{2}{6}$ c) $\frac{2}{4}$ d) $\frac{3}{4}$ e) $\frac{7}{9}$ f) $\frac{5}{6}$

2.

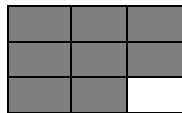
a)



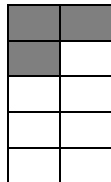
c)



b)



d)



3. $\frac{1}{1}, \frac{4}{4}, \frac{10}{10}, \frac{3}{3}, \frac{2}{2}$ 4. $\frac{1}{2}, \frac{1}{7}, \frac{1}{4}, \frac{1}{6}, \frac{1}{10}$
 5. $\frac{7}{8}, \frac{3}{4}, \frac{99}{100}, \frac{1}{3}, \frac{12}{13}$ 6. $\frac{7}{6}, \frac{3}{2}, \frac{5}{3}, \frac{7}{4}, \frac{31}{30}, \frac{11}{9}$

Exercises 5.2

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

Exercises 5.3

1. a) 1, 2, 3, 4, 6, 8, 12, 24 b) 1, 5, 7, 35
 c) 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

- d) 1, 5, 11, 55 2. a) 6 b) 9 c) 1 d) 16
 3. a) 11, 22, 33, 44, 55, 66 b) 9, 18, 27, 36, 45, 54 c) 6, 12, 18, 24, 30, 36
 d) 4, 8, 12, 16, 20, 24 4. a) 12 b) 35
 c) 15 d) 24 e) 42 f) 24

Exercises 5.4

1. a) $\frac{3}{2}, \frac{6}{4}, \frac{12}{8}$ b) $\frac{2}{5}, \frac{4}{10}, \frac{8}{20}$ c) $\frac{3}{4}, \frac{6}{8}, \frac{12}{16}$
 d) $\frac{4}{9}, \frac{8}{18}, \frac{16}{36}$ e) $\frac{5}{12}, \frac{10}{24}, \frac{20}{48}$ f) $\frac{2}{6}, \frac{4}{12}, \frac{8}{24}$
 2. a) $\frac{1}{2}$ b) $\frac{3}{4}$ c) $\frac{2}{3}$ d) $\frac{1}{4}$ e) $\frac{1}{6}$ f) $\frac{1}{9}$ 3. a) 10
 b) 6 c) 24 d) 12 e) 14 f) 12 4. a) >
 b) < c) > d) > e) = f) =

Exercises 5.5

1. $3\frac{1}{2}, 4\frac{2}{3}, 2\frac{3}{8}, 5\frac{1}{4}, 12\frac{5}{6}$ 2. a) $1\frac{1}{8}$ b) $3\frac{1}{2}$
 c) $2\frac{3}{10}$ d) $2\frac{2}{3}$ e) $3\frac{1}{5}$ f) $3\frac{4}{10}$ 3. a) $\frac{16}{5}$ b) $\frac{26}{5}$
 c) $\frac{61}{6}$ d) $\frac{11}{4}$ e) $\frac{27}{4}$ f) $\frac{23}{3}$

Exercises 5.6

1. a) 0.75 b) 0.2 c) 0.25 d) 0.625
 e) 0.5 f) $0.8\dot{3}$ g) $0.\overline{45}$ h) $0.\dot{6}$
 2. a) 0.25 b) 0.35 c) 0.5 d) 0.6 e) 0.74
 f) 0.52 g) 0.8 h) 0.95 3. a) $\frac{1}{2}$
 b) $\frac{24}{100}$ or $\frac{6}{25}$ c) $\frac{7}{10}$ d) $\frac{36}{100}$ or $\frac{9}{25}$ e) $\frac{93}{100}$
 f) $\frac{4}{10}$ or $\frac{2}{5}$ g) $3\frac{3}{4}$ h) $2\frac{15}{100}$ or $2\frac{3}{20}$

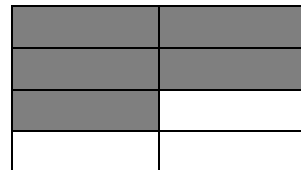
Exercises 5.7

1. $\frac{2}{6} < \frac{1}{2}$ 2. $\frac{5}{9} > \frac{1}{2}$ 3. $\frac{3}{5} > \frac{1}{4}$ 4. $\frac{5}{8} < \frac{3}{4}$
 5. Closer to $\frac{1}{2}$ 6. closer to $\frac{3}{4}$

Self-Assessment – Chapter 5

1. C

2.



3. One equal part of a whole

4. 12 5. 60 6. 12 7. $\frac{4}{10}, \frac{8}{20}$ 8. =

9. $2\frac{1}{4}$ 10. $\frac{19}{6}$ 11. D 12. Closer to $\frac{1}{2}$

Performance Task – Chapter 5

1. $\frac{1}{2}$ with $\frac{4}{8}, \frac{3}{6}, \frac{2}{4}$; $\frac{1}{4}$ with $\frac{2}{8}, \frac{3}{12}$; $\frac{3}{4}$ with $\frac{9}{12}, \frac{6}{8}$;
 $\frac{2}{3}$ with $\frac{8}{12}, \frac{6}{9}$; $\frac{1}{3}$ with $\frac{3}{9}, \frac{2}{6}, \frac{4}{12}$
2. Answers will vary.

CHAPTER 6

Exercises 6.1

1. a) $\frac{10}{11}$ b) $\frac{15}{25}$ or $\frac{3}{5}$ c) $\frac{5}{7}$ d) $\frac{6}{8}$ or $\frac{3}{4}$ e) $\frac{10}{15}$ or $\frac{2}{3}$
 f) $\frac{12}{9}$ or $1\frac{3}{9}$ or $1\frac{1}{3}$ 2. a) $1\frac{5}{12}$ b) $1\frac{2}{15}$ c) $1\frac{1}{8}$
 d) $2\frac{1}{15}$ e) $1\frac{1}{3}$ f) $2\frac{5}{6}$ g) $1\frac{7}{10}$ h) $1\frac{9}{20}$ 3. $\frac{5}{6}$

Exercises 6.2

1. a) $\frac{3}{9}$ or $\frac{1}{3}$ b) $\frac{8}{12}$ or $\frac{2}{3}$ c) $\frac{5}{8}$ d) $\frac{8}{40}$ or $\frac{1}{5}$
 e) $\frac{6}{15}$ or $\frac{2}{5}$ f) $\frac{5}{25}$ or $\frac{1}{5}$ 2. a) $\frac{4}{9}$ b) $\frac{4}{9}$ c) $\frac{1}{12}$
 d) $\frac{1}{2}$ 3. $\frac{4}{8}$ or $\frac{1}{2}$ of a jug 4. $\frac{1}{8}$ mile 5. $\frac{2}{3}$ boxes
 6. $\frac{7}{10}$

Exercises 6.3

1. a) $2\frac{5}{8}$ b) $11\frac{3}{7}$ c) $7\frac{4}{5}$ d) $3\frac{3}{10}$ e) $5\frac{3}{8}$
 f) $12\frac{7}{10}$ 2. a) $1\frac{1}{10}$ b) $2\frac{13}{15}$ c) $15\frac{1}{3}$ d) $2\frac{3}{8}$
 e) $4\frac{1}{12}$ f) $8\frac{1}{30}$ 3. $18\frac{3}{4}$ bags 4. $5\frac{1}{2}$ pounds
 5. $28\frac{19}{20}$ crates 6. $1\frac{1}{3}$ hours

Exercises 6.4

1. $3\frac{3}{4}$ cups 2. $3\frac{2}{15}$ hours 3. $15\frac{7}{20}$ yards
 4. $28\frac{7}{9}$ packs 5. $7\frac{8}{15}$ laps 6. a) Incorrect
 b) Incorrect

Self-Assessment – Chapter 6

1. a) $1\frac{1}{7}$ b) $\frac{7}{8}$ c) $10\frac{1}{12}$ d) $4\frac{1}{8}$ 2. a) $\frac{3}{11}$
 b) $3\frac{2}{3}$ c) $3\frac{1}{3}$ d) $8\frac{5}{9}$ 3. Incorrect, he shared
 $\frac{5}{8}$. 4. 6 5. $\frac{3}{8}$ 6. $23\frac{1}{2}$ 7. a) Correct
 b) Incorrect

Performance Task – Chapter 6

1. Dog A = $\frac{1}{2}$; Dog B = $\frac{1}{6}$; Dog C = $\frac{1}{2}$;

- Dog D = $\frac{1}{2}$ 2. Dog E has $\frac{1}{3}$ too much.
 3. Answers will vary.

CHAPTER 7

Exercises 7.1

1. a) $\frac{3}{8}$ b) $\frac{6}{2}$ or 3 c) $\frac{2}{7}$ d) $\frac{12}{4}$ or 3
 e) $\frac{5}{3}$ or $1\frac{2}{3}$ f) $\frac{4}{5}$ 2. a) $3\frac{3}{4}$ b) $\frac{12}{2}$ or 6
 c) $\frac{6}{5}$ or $1\frac{1}{5}$ d) $\frac{30}{4}$ or $7\frac{1}{2}$ e) $\frac{16}{3}$ or $5\frac{1}{3}$
 f) $\frac{20}{6}$ or $3\frac{1}{3}$ 3. $4\frac{1}{2}$ hours 4. 33 m
 5. $\frac{25}{3}$ or $8\frac{1}{3}$ teaspoons 6. 42 packs
 7. $\frac{21}{5}$ or $4\frac{1}{5}$ glasses

Exercises 7.2

1. $\frac{2}{15}$ 2. $\frac{3}{20}$ 3. $\frac{1}{9}$ 4. $\frac{3}{16}$ 5. $\frac{2}{15}$ 6. $\frac{1}{12}$ 7. $\frac{5}{18}$

Exercises 7.3

1. a) $\frac{10}{21}$ b) $\frac{12}{3}$ or 4 c) $\frac{4}{15}$ d) $\frac{1}{30}$ e) $\frac{15}{21}$ or $\frac{5}{7}$
 f) $\frac{14}{36}$ or $\frac{7}{18}$ g) $\frac{5}{12}$ h) $\frac{8}{24}$ or $\frac{1}{3}$ 2. $\frac{5}{16}$ of a mile
 3. $\frac{6}{6}$ or 1 bowl 4. $\frac{5}{8}$ more of a mile
 5. $13\frac{1}{8}$ teaspoons 6. a) $\frac{4}{12}$ or $\frac{1}{3}$ b) $\frac{15}{24}$ or $\frac{5}{8}$
 c) $\frac{3}{15}$ or $\frac{1}{5}$

Exercises 7.4

1. a) < b) > c) < d) > e) < f) < g) =
 h) > i) = j) > k) < l) < 2. a) < b) <
 c) = d) > 3. No, the distance is shorter.
 4. Yes, he used $\frac{15}{32}$ of a teaspoon. 5. Yes,
 the second board was $\frac{25}{32}$ yards longer.
 6. They both cycled the same distance.

Exercises 7.5

1. a) $\frac{1}{16}$ b) $\frac{1}{8}$ c) $\frac{1}{20}$ d) $\frac{1}{18}$ 2. a) $\frac{1}{12}$ b) $\frac{1}{6}$
 c) $\frac{1}{16}$ d) $\frac{1}{15}$ e) $\frac{1}{16}$

Exercises 7.6

1. a) 16 b) 9 c) 24 d) 10 e) 12
 f) 12

Answers

Exercises 7.7

1. $\frac{1}{15}$ pie 2. $\frac{1}{18}$ pound 3. $\frac{1}{16}$ cup
4. 24 scoops 5. 6 people

Self-Assessment – Chapter 7

1. a) $\frac{5}{6}$ b) $\frac{12}{5}$ or $2\frac{2}{5}$ c) $\frac{8}{12}$ or $\frac{2}{3}$ d) $\frac{10}{21}$ 2. $\frac{1}{4}$
3. A or C 4. $\frac{4}{9}$ 5. $1\frac{1}{8}$ miles 6. Yes, $\frac{9}{8}$ is greater than 1 so the distance jumped is greater than the original jump. 7. A
8. a) $\frac{1}{15}$ b) $\frac{1}{10}$ 9. a) 24 b) 18 10. 15 banners 11. $\frac{1}{10}$ cup

Performance Task – Chapter 7

1. $\frac{3}{4}$ cup butter
 $\frac{1}{2}$ cup white sugar
 $\frac{3}{8}$ cup brown sugar
 $\frac{2}{3}$ teaspoon vanilla extract
1 large egg
 $1\frac{3}{4}$ cups flour
 $\frac{1}{4}$ tsp baking soda
 $\frac{1}{2}$ tsp salt
 $\frac{3}{4}$ cup chocolate chips
2. $5 \div \frac{1}{3} = 15$ 3. $4 \div \frac{1}{3} = 12$

CHAPTER 8

Exercises 8.1

1. a) meters b) centimeters
c) kilometers d) meters 2. a) 11,000 m
b) 800 cm c) 450 mm d) 250 cm e) 8 m
f) 8.5 km 3. B & C are incorrect.
B = 0.004 km, C = 16 cm 4. a) 4,000 meters
b) 400,000 centimeters
5. a) 150 cm b) 1,500 millimeters
6. a) 21 km b) 21,000 m 7. a) 425 cm
b) 4 shelves 8. a) 6 b) 60 cm

Exercises 8.2

1. a) yards b) inches c) miles d) inches
2. a) 168 in b) 24 ft c) 4 ft d) 4,400 yds
e) 3 yds f) 106.5 ft 3. A & C are incorrect.
A = 2.5 feet, C = 432 feet 4. 66 inches
5. a) 8,800 yds b) 26,400 ft
6. a) 6.5 miles b) 11,440 yds 7. a) 96 in
b) 16 pieces

Exercises 8.3

1. a) ounces b) pounds c) tons
2. a) 224 oz b) 144 oz c) 0.24 tons
d) 5000 lbs e) 4 pounds f) 1 lb
3. 117 lbs 4. a) 2,800lbs b) 44,800 oz
5. a) 72 pounds b) Answers will vary.

Exercises 8.4

1. a) minutes b) hours c) weeks
d) weeks 2. a) 35 days b) 3 weeks
c) 4 days d) 336 hours e) 360 mins
f) 8 hours 3. a) 132 hours b) 3.5 days
c) 4.5 hours d) 330 minutes e) 42 days
f) 2.5 weeks g) 1.25 days h) 3.75 hours
4. 72 hours 5. 60 hours 6. a) 48 hours
b) 2,880 minutes 7. a) 21 days
b) 504 hours c) 30,240 minutes

Exercises 8.5

1. 16 pieces 2. 21 steps 3. Miguel is longer by 1 day. 4. Answers will vary.
5. 447.8 ft 6. 13,112 yards

Self-Assessment – Chapter 8

1. a) 350 mm b) 400 cm c) 16 cm
d) 2.5 m e) 3,500 m f) 0.5 km
2. a) 114 in b) 11.25 ft c) 8 ft
d) 9,680 yds e) 3 yds f) 2,040 ft
3. a) 52.5 days b) 2.5 weeks c) 2.5 days
d) 204 hours e) 270 minutes
f) 12.5 hours 4. a) 16,000 m b)
1,600,000 cm c) no 5. a) inches b) feet
c) meters d) kilometers 6. a) 28 days
b) 42 hours 7. a) 800 cm b) 25 pieces

Performance Task – Chapter 8

Answers will vary.

CHAPTER 9

Exercises 9.1

- a) 4 cubic units b) 6 cubic units
c) 9 cubic units d) 10 cubic units
e) 8 cubic units f) 16 cubic units
- 1 cubic centimeter 3. About 7 cubes
- About 36 cubes 5. It will be bigger than this page.

Exercises 9.2

- a) 48 in³ b) 56 in³ 2. a) 80 ft³
b) 42 yds³ 3. a) 300 cm³ b) 96 mm³
c) 192 m³ d) 18.9 cm³ 4. 6 in³ 5. 12 in³
6. 2.728 yds³ 7. b) 550 yds³ c) \$687.50

Exercises 9.3

- a) 120 in³ b) 108 in³ c) 360 ft³
- a) 30 ft² b) 420 ft³ 3. b) 180 yds³
c) \$1,134 4. b) the depth or height
- a) 60 m³ b) 192 cm³ c) 322 cm³
d) 720 cm³ 6. 450 cm³

Exercises 9.4

- a) 375 in³ b) 565 in³ c) 217 in³
d) 336.875 ft³

Exercises 9.5

- 4 ft 2. 200 yds 3. b) 8 ft 4. 3.3 ft
5. 6ft 6. 20 yds 7. 2 in

Self-Assessment – Chapter 9

- a) 8 cubic units b) 14 cubic units
- 252 in³ 3. a) 91.08 ft³ b) 10.5 yds³
- Answers may vary. 5. 202.5 in³
- 181.125 in³ 7. 315 in³ 8. a) 1.44 cm³
b) 1.44 mL 9. The room is not tall enough for the door. The room is 6 feet tall.

Performance Task – Chapter 9

- A) 180 in³ B) Answers will vary.

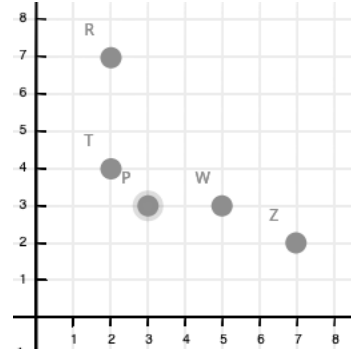
CHAPTER 10

Exercises 10.1

- R(2, 5) C(3, 1) N(5, 4) P(7, 6)

- A(2, 4) B(3, 1) C(6, 2) D(8, 6)

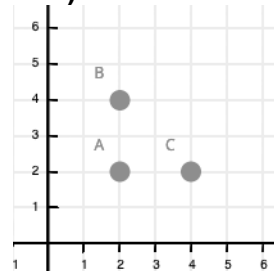
3.



- (0, 0) is at the origin, the bottom left of the grid. 5. a) T(6, 6) H(2, 4) R(4, 2)

- b) T(8, 5)

6. a)

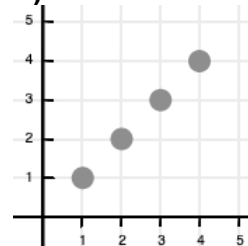


- b) Triangle

Exercises 10.2

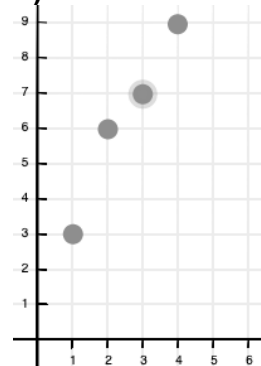
- a) (1, 1), (2, 2), (3, 3), (4, 4)

b)



- a) (1, 3), (2, 6), (3, 7), (4, 9)

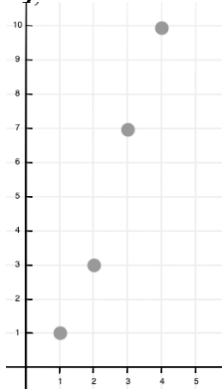
b)



Answers

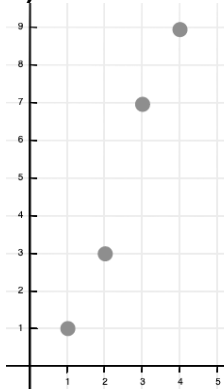
3. a) (1, 1), (2, 3), (3, 7), (4, 10)

b)



c) The tree gets taller every week. Answers may vary. 4. a) (1, 1), (2, 3), (3, 7), (4, 9)

b)



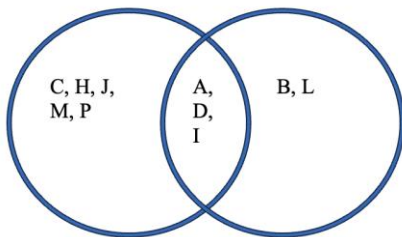
c) More miles jogged each week
d) More than 10, Answers may vary.

Exercises 10.3

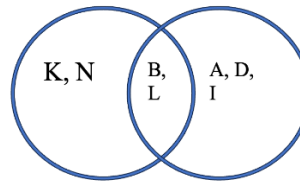
1. a) acute b) right c) obtuse
d) straight e) right f) acute

Exercises 10.4

1. B 2. No parallel sides, perpendicular sides are XY and YZ, right angle at XYZ
3. a) B, L, K, N b) A, I, F c) A, C, D, F, H, I, J, M, P d) A, B, D, I, L e) A, I
4.



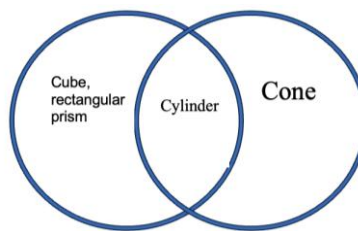
5.



6. Rectangle has two pairs of parallel sides and 2 pairs of congruent sides.
Parallelogram has two pairs of parallel sides and 2 pairs of congruent sides.
Trapezoid has one pair of parallel sides and no congruent sides.

Exercises 10.5

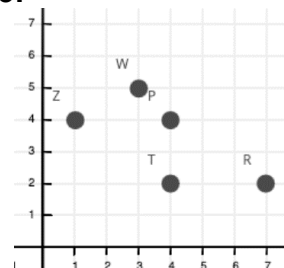
1. a) Cube; 6 faces, 12 edges, and 8 vertices b) Rectangular prism, 6 faces, 12 edges, and 8 vertices 2. a) Cone, Cylinder b) Cone c) Cone, cube, rectangular prism d) Cube, rectangular prism, cylinder
3.



4. a) Cube, rectangular prism, cylinder
b) Cylinder 5. Cube 6. 0 7. 1 8. 0 9. 0
10. The center is at an interior point the same distance from all other points on the surface of the sphere.
11. Answers will vary.

Self-Assessment – Chapter 10

1. a) Square, quadrilateral
b) Quadrilateral, trapezoid
c) Quadrilateral, rectangle
2. A(2, 7) B(4, 2) C(6, 8) D(9, 5)
3.



- 4. **b)** Both have a circle as a face, and both have two kinds of faces. **c)** One has a vertex; one has a rectangle as a face.
- 5. **b)** same number of sides and vertices
- c)** One uses rectangles.
- 6. **a)** polygon and hexagon
- b)** parallelogram and rectangle
- 7. **a)** rectangular prism
- b)** 6 faces, 12 edges, and 8 vertices

Performance Task – Chapter 10

Answers will vary.

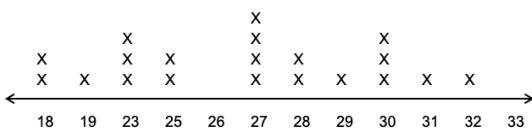
CHAPTER 11

Exercises 11.1

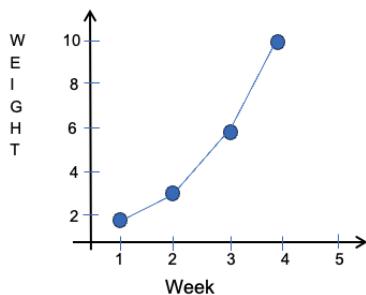
- 1. Population = 29, sample = 8
- 2. **a)** Students from each class
- b)** Answers will vary. **3.** Answers will vary.
- 4. Answers will vary. **5. a)** Answers may vary. Graph #1 **b)** Answers may vary. The bars in the two graphs are different sizes, which is misleading. The narrower bar for October makes the number of TVs sold appear much smaller than it is.
- 6. No, the sample is biased.

Exercises 11.2

- 1. **a)** Apple **b)** Chocolate **c)** 12 **d)** 6
- 2.



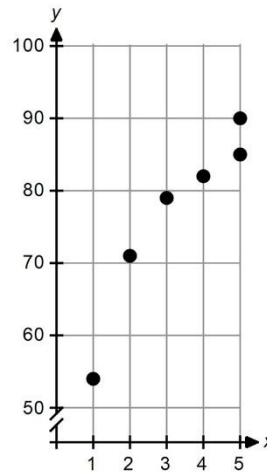
- 3. **a)** 20 **b)** 14 **c)** 27 **d)** 12
- 4.



- 5. **a)** Student #2 **b)** Student #3
- c)** 36 cards **d)** 72 cards

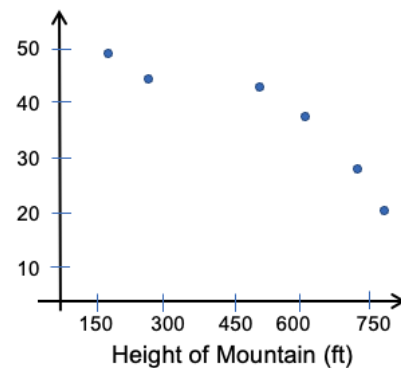
Exercises 11.3

- 1. Up
- 2. **a)**



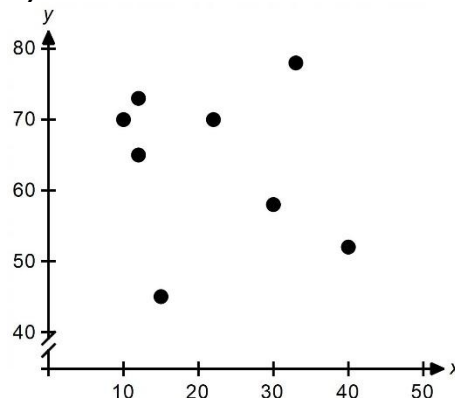
- b)** The more hours studying results in a higher grade
- 3. **a)** The higher up the mountain, the cooler the temperature

b)



- c)** It shows the opposite.
- 4. **a)** Answers may vary.

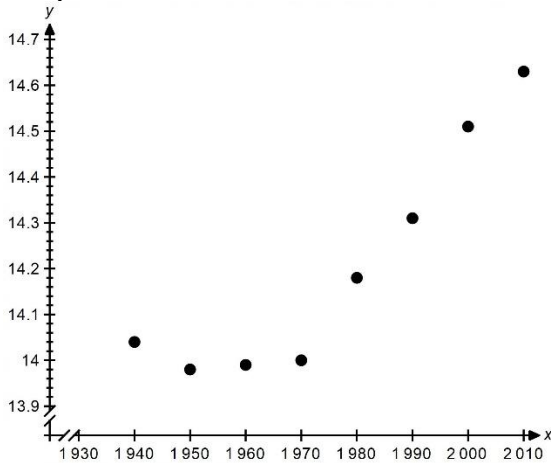
b)



- c)** No correlation

Answers

5. a)



- b) The temperature is rising.
 c) It will continue to increase.
 d) to find the average

Exercises 11.4

1. a) mean = 4, range = 7 b) mean = 13, range = 19 c) mean = 24, range = 18
 d) mean = 55, range = 70 2. a) mode = 1, range = 7 b) mode = 5, range = 19
 c) mode = 20, range = 18 d) mode = 45, range = 70 3. a) median = 4, range = 7
 b) median = 12, range = 19
 c) median = 21, range = 18
 d) median = 51, range = 70 4. 4.4 hours
 5. mean = 26.87, median = 28, mode = 33, range = 32 6. a) mean = 8.3, median = 8, mode = 8, range = 3
 b) Answers will vary. 7. a) mean = 84, median = 80, mode = none, range = 53
 b) mean

Exercises 11.5

1. a) heads = $\frac{40}{75}$ b) tails = $\frac{35}{75}$
 2. a) red = $\frac{14}{50}$ b) tails = $\frac{20}{50}$
 3. $\frac{34}{50}$ chance to not land on yellow
 4. a) $\frac{17}{50}$ b) $\frac{15}{50}$ c) $\frac{35}{50}$ d) $\frac{50}{50}$

Exercises 11.6

1. a) $\frac{1}{3}$ b) $\frac{1}{3}$ c) $\frac{0}{3}$ or 0 d) $\frac{3}{3}$ or 1 e) $\frac{2}{3}$
 2. a) $\frac{1}{3}$ b) $\frac{2}{3}$ c) $\frac{1}{3}$ d) $\frac{3}{3}$ or 1 3. a) $\frac{3}{13}$
 b) $\frac{5}{13}$ c) $\frac{5}{13}$ 4. a) They equal 1 whole.
 b) Answers will vary.

Self-Assessment – Chapter 11

1. a) population = 525, sample = 50
 b) population = 220, sample = 40
 2. Answers will vary.
 3. a) 25 feet b) 9 feet 4. mean = 3.52, median = 4, mode = 2, range = 6
 5. a) $\frac{105}{200}$ b) $\frac{95}{200}$ 6. a) $\frac{1}{5}$ b) $\frac{2}{5}$

Performance Task – Chapter 11

Activity 1

- a) white and red 1, white and red 2, green and red 1, green and red 2, red 1 and white, red 1 and green, red 2 and white, red 2 and green
 b) $\frac{2}{12}$ or $\frac{1}{6}$

Activity 2

- a) boy and girl, girl and boy
 b) $\frac{1}{4}$