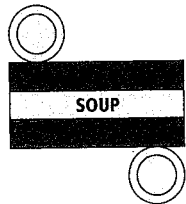
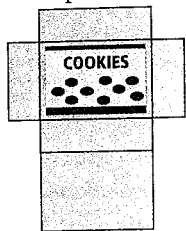


10. a) cylinder b) triangular prism c) rectangular prism

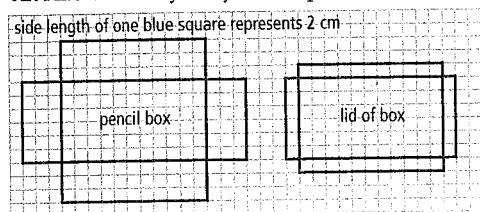
11. a) Answers may vary.

b) Answers may vary.

Example:



12. Answers may vary. Example:



13. a) 864 cm^2 b) 10.5 m^2

14. 3648 mm^2

15. a) 144 cm^2 b) 3865 cm^2

16. 5309 cm^2

17. 125.6 m^2

18. 92.9 cm^2

19. $19\,939 \text{ cm}^2$

Chapter 6

6.1 Multiplying a Fraction and a Whole Number, pages 202–203

4. a) $4 \times \frac{1}{3} = \frac{4}{3}$ b) $3 \times \frac{2}{5} = \frac{6}{5}$

5. a) $2 \times \frac{5}{4} = \frac{10}{4}$ b) $4 \times \frac{1}{6} = \frac{4}{6}$

6. a) 2;

b) $\frac{21}{10}$;

c) $\frac{10}{3}$;

d) $\frac{9}{8}$;

7. a) $\frac{3}{8}$ b) $\frac{6}{4}$ c) $\frac{12}{5}$ d) $\frac{8}{3}$

8. $4 \times \frac{1}{2} = 2$; The width of the flag is 2 m.

9. $12 \times \frac{3}{4} = 9$; There are nine people on the minibus.

10. a) $\frac{1}{6}$ b) $6 \times \frac{1}{6} = 1$; The area of each face is 1 cm^2 .

11. $12 \times \frac{5}{6} = 10$; Asma's car uses only 10 L of gasoline per 100 km.

12. $10\,000\,000 \times \frac{1}{5} = 2\,000\,000$; Nunavut is about 2 000 000 km^2 .

13. a) 5; Example: Divide the previous product by two to continue the pattern. b) Answer may vary.

Example: $9 \times 9 = 81$, $3 \times 9 = 27$, $1 \times 9 = 9$, $\frac{1}{3} \times 9 = 3$

14. Answers may vary. Example: Jane spends $\frac{1}{4}$ of her allowance on books. If Jane's allowance is \$8 each week, how much does she spend on books? Answer: $\frac{1}{4} \times 8 = 2$; She spends \$2 each week on books.

15. $30 \times \frac{4}{5} = 24$; Twenty-four students have brown eyes.

16. $15 \times \frac{1}{5} = 3$; The shortest side measures 3 cm.

$15 - 3 = 12$, $12 \div 2 = 6$; The other two sides measure 6 cm each.

17. 341 cm

6.2 Dividing a Fraction by a Whole Number, pages 208–209

4. a) $\frac{1}{4} \div 2 = \frac{1}{8}$;

b) $\frac{1}{3} \div 3 = \frac{1}{9}$;

c) $\frac{1}{5} \div 2 = \frac{1}{10}$;

d) $\frac{5}{6} \div 4 = \frac{5}{24}$;

5. a) $\frac{3}{10}$ b) $\frac{1}{15}$ c) $\frac{1}{8}$ d) $\frac{1}{9}$

6. a) A serving of dhopa requires $\frac{1}{4}$ of a coconut.

b) A serving of molee curry requires $\frac{1}{8}$ of a coconut.

7. Each student gets $\frac{1}{6}$ of a full pitcher.

8. Each of these provinces represents $\frac{1}{15}$ of the area of Canada.

9. a) She averages $\frac{1}{12}$ of an hour per lap. b) 5 min

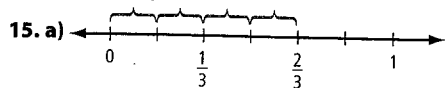
10. He averages $\frac{1}{15}$ of a tank per round trip.

11. Vancouver has frost on about $\frac{3}{20}$ of the days in a year.

12. It takes $\frac{2}{5}$ of a roll to wrap three packages.

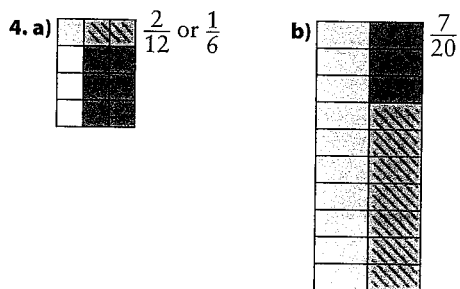
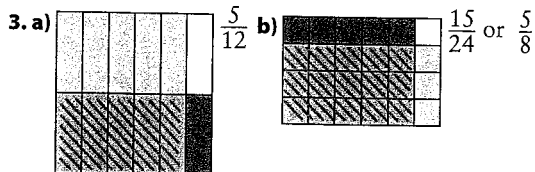
13. Answers may vary. Example: Ryan divides three quarters of a watermelon among himself and five friends. What fraction of the watermelon does each person receive? Answer: $\frac{1}{8}$

14. $\frac{8}{15}$, $\frac{10}{15}$ or $\frac{2}{3}$



b) Answers may vary. Example: The number line shows that there would be four sections of $\frac{1}{6}$.

6.3 Multiplying Proper Fractions, pages 214–215



5. a) Estimates will vary. Example: $\frac{1}{4}$; Answer: $\frac{1}{4}$

b) Estimates will vary. Example: 0; Answer: $\frac{3}{42}$ or $\frac{1}{14}$

c) Estimates will vary. Example: $\frac{1}{2}$; Answer: $\frac{9}{16}$

6. a) Estimates will vary. Example: $\frac{1}{2}$; Answer: $\frac{8}{25}$

b) Estimates will vary. Example: 1; Answer: $\frac{7}{10}$

c) Estimates will vary. Example: $\frac{1}{4}$; Answer: $\frac{12}{36}$ or $\frac{1}{3}$

7. $\frac{1}{8}$ of a pie

8. a) $\frac{1}{12}$ b) 2 h

9. approximately $\frac{1}{200}$

10. $\frac{3}{10}$

11. a) $\frac{1}{3}$ b) 28

12. Answers may vary. Example: A bottle is $\frac{3}{4}$ full of juice.

If Karen drinks $\frac{1}{2}$ of the juice in the bottle, what fraction of a full bottle did she drink? Answer: $\frac{3}{8}$

13. $\frac{6}{52}$ or $\frac{3}{26}$

14. a) $\frac{1}{8}$ b) $\frac{1}{15}$ c) $\frac{1}{8}$ d) $\frac{7}{32}$

15. a) $\frac{5}{8}$ b) $\frac{7}{9}$ c) $\frac{3}{4}$ d) $\frac{5}{6}$

16. a) $\frac{1}{4}$ and $\frac{1}{4}$ b) $\frac{1}{3}$ and $\frac{1}{2}$ c) $\frac{1}{6}$ and $\frac{1}{2}$

6.4 Multiplying Improper Fractions and Mixed Numbers, pages 220–221

4. a) $3\frac{2}{3}$ b) $2\frac{5}{6}$ c) $12\frac{1}{2}$ d) $1\frac{3}{5}$

5. a) $\frac{19}{4}$ b) $\frac{23}{8}$ c) $\frac{19}{3}$ d) $\frac{25}{7}$

