20. $\mathbf{2\frac{2}{5}}$; $\frac{12}{5} = 2\frac{2}{5}$

21. **9;** there are 9 one tenths in nine tenths.

22. $\mathbf{\frac{9}{12}}$; $\mathbf{\frac{2}{12}}$; $\mathbf{\frac{7}{12}}$; we multiply $\frac{3}{4}$ by $\frac{3}{3}$ and $\frac{1}{6}$ by $\frac{2}{2}$. $\frac{3}{4} \times \frac{3}{3} = \mathbf{\frac{9}{12}}$ and $\frac{1}{6} \times \frac{2}{2} = \mathbf{\frac{2}{12}}$. Then we subtract $\frac{9}{12}$ and $\frac{2}{12}$ to find their difference. $\frac{9}{12} - \frac{2}{12} = \mathbf{\frac{7}{12}}$.

23. $\mathbf{12\frac{3}{10}}$;

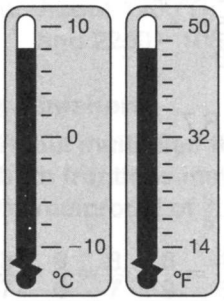
$$\begin{array}{r} 12\frac{3}{10} \text{ sec} \\ 10\overline{)123} \\ -10 \\ \hline 23 \\ -20 \\ \hline 3 \end{array}$$

24. a. 14 toothpicks

b. 12 small squares

25. **8°C;** each tick mark represents 2°C.

26.



27. **4;** $10 - 6 = 4$

28. C

29. a. D

b. Sample: Every square is a rhombus, but some rhombuses are not squares.

30. **85.7 square miles;** Step 1: Find the area of Denver.

$$\begin{array}{r} 2\cancel{9}^{8}{}^{1}2.5 \\ -\ 139.1 \\ \hline 153.4 \end{array}$$

Step 2: Find the area of Honolulu.

$$\begin{array}{r} 1\cancel{5}^{4}{}^{1}\cancel{3}^{2}{}^{1}.4 \\ -\ 67.7 \\ \hline 85.7 \end{array}$$

Early Finishers

a. 4 blocks

b. Both distances are equal.

Lesson Practice 96

a. $\mathbf{\frac{2}{3}}$; $\frac{1}{3} \div \frac{1}{2}$

$\frac{1}{3} \times \frac{2}{1} = \frac{2}{3}$

b. $\mathbf{\frac{8}{9}}$; $\frac{2}{3} \div \frac{3}{4}$

$\frac{2}{3} \times \frac{4}{3} = \frac{8}{9}$

c. $\mathbf{2\frac{2}{3}}$; $\frac{2}{3} \div \frac{1}{4}$

$\frac{2}{3} \times \frac{4}{1} = \frac{8}{3} = 2\frac{2}{3}$

d. $\mathbf{1\frac{1}{2}}$; $\frac{1}{2} \div \frac{1}{3}$

$\frac{1}{2} \times \frac{3}{1} = \frac{3}{2} = 1\frac{1}{2}$

e. $\mathbf{1\frac{1}{8}}$; $\frac{3}{4} \div \frac{2}{3}$

$\frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1\frac{1}{8}$

f. **4;** $3 \div \frac{3}{4}$

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

g. **6;** $2 \div \frac{1}{3}$

$2 \times \frac{3}{1} = \frac{6}{1} = 6$

h. $\mathbf{4\frac{1}{2}}$; $3 \div \frac{2}{3}$

$3 \times \frac{3}{2} = \frac{9}{2} = 4\frac{1}{2}$

i. **12;** $10 \div \frac{5}{6}$

$10 \times \frac{6}{5} = \frac{60}{5} = 12$

j. $\mathbf{2\frac{1}{4}}$; $\frac{3}{4} \div \frac{1}{3}$

$\frac{3}{4} \times \frac{3}{1} = \frac{9}{4} = 2\frac{1}{4}$

k. $\frac{4}{9}$; $\frac{1}{3} \div \frac{3}{4}$

$\frac{1}{3} \times \frac{4}{3} = \frac{4}{9}$

Written Practice 96

1. 

2. $\frac{1}{4}$; **25%;** half of half is equal to one quarter

3. **8;** $\frac{2}{3} \times 12 = \frac{24}{3} = 8$

4. **350,000;** round 712 to 700 and 490 to 500, then multiply 700 × 500 = 350,000

5. **93,814,200**

6. **B**

7. $\frac{5}{20}$; $\frac{4}{20}$; $\frac{9}{20}$; we multiply $\frac{1}{4}$ by $\frac{5}{5}$ and $\frac{1}{5}$ by $\frac{4}{4}$. $\frac{1}{4} \times \frac{5}{5} = \frac{5}{20}$ and $\frac{1}{4} \times \frac{4}{4} = \frac{4}{20}$. Then we add $\frac{5}{20}$ and $\frac{4}{20}$ to find their sum. $\frac{5}{20} + \frac{4}{20} = \frac{9}{20}$

8. a. **10;** $1 \div \frac{1}{10}$

$1 \times \frac{10}{1} = \frac{10}{1} = 10$

b. **30;** $3 \div \frac{1}{10}$

$3 \times \frac{10}{1} = \frac{30}{1} = 30$

9. **3, 6, 9, 12**

10. $7\frac{1}{2}$ **tons;** $\frac{3}{4} \times 10 = \frac{30}{4} = 7\frac{2}{4} = 7\frac{1}{2}$

11. **3 cm;** 10 cm − 3 cm − 4 cm = 3 cm

12. **0.75;** $\frac{3}{4}$; **75%**

13. $1\frac{1}{3}$; $\frac{1}{3} \div \frac{1}{4}$

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

14. $\frac{3}{4}$; $\frac{1}{4} \div \frac{1}{3}$

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

15. **6;** $3 \div \frac{1}{2}$

$3 \times \frac{2}{1} = \frac{6}{1} = 6$

16. **2.35;** $m = 3.75 - 1.4$;

$$\begin{array}{r} 3.75 \\ -\,1.4 \\ \hline 2.35 \end{array}$$

17. **5.15;** $m = 3.75 + 1.4$;

$$\begin{array}{r} \overset{1}{3}.75 \\ +\,1.4 \\ \hline 5.15 \end{array}$$

18. $\frac{10}{10}$; $\frac{1}{10} \times \frac{10}{10} = \frac{10}{100}$

19. **\$9.40;**

$$\begin{array}{r} \$0.4\overset{1}{7} \\ \times\ 20 \\ \hline \$9.40 \end{array}$$

20. **37 R 13;**

$$\begin{array}{r} 37 \text{ R } 13 \\ 15\overline{)568} \\ -45 \\ \hline 118 \\ -105 \\ \hline 13 \end{array}$$

21. **14 R 7;**

$$\begin{array}{r} 14 \text{ R } 7 \\ 30\overline{)427} \\ -30 \\ \hline 127 \\ -120 \\ \hline 7 \end{array}$$

22. **\$5.04;** $m = \frac{\$30.24}{6}$;

$$\begin{array}{r} \$\ 5.04 \\ 6\overline{)\$30.24} \\ -30 \\ \hline 02 \\ -0 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

23. $1\frac{2}{3}$; $5 \times \left(\frac{2}{3} \times \frac{1}{2}\right)$

$5 \times \frac{2}{6} = \frac{10}{6} = 1\frac{4}{6} = 1\frac{2}{3}$

24. $1\frac{3}{4}$; $5 - \left(1\frac{1}{4} + 2\right)$

$5 - 3\frac{1}{4}$

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

25. **10 < 25**

26. a. **20**

    b. **13;** 31 − 18 = 13

    c. **26**

27. a. **isosceles triangle**

    b. **reflection**

28. **July 24;** 20 days after July 4th is July 24.

29. **5 fewer gallons; I used compatible numbers; Since 500 ÷ 20 = 25 and 500 ÷ 25 = 20, Trina will need to purchase about 25 − 20, or 5 fewer gallons.**

30. a. **100°C;** 2250°C − 2150°C = 100°C

    b. **Hafnium**

    c. **About 1200°C; 1064.43 is close to 1050, and 2250 − 1050 = 1200.**

Early Finishers

a. **Rahul multiplied the reciprocals of both fractions instead of multiplying by reciprocal of $\frac{9}{6}$.**

b. $\frac{8}{7} \div \frac{9}{6} = \frac{8}{7} \times \frac{6}{9} = \frac{48}{63} = \frac{16}{21}$

Lesson Practice 97

a. $\frac{3}{2}$; $\frac{30}{20} = \frac{3}{2}$

b. $\frac{2}{3}$; $\frac{20}{30} = \frac{2}{3}$

c. $\frac{4}{5}$; $\frac{8}{10} = \frac{4}{5}$

d. $\frac{5}{4}$; $\frac{10}{8} = \frac{5}{4}$

Written Practice 97

1. $\frac{3}{2}$; $\frac{15}{10} = \frac{3}{2}$

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

3. **$2.50; I added to find the total amount of money and divide by 2.** ($4.80 + $0.75 + $0.20 + $0.05) ÷ 2 = $5.00 ÷ 2 = $2.50

4. **4;** there are 4 one-eighths in one half.

5. **2.5; $2\frac{1}{2}$;** $2\frac{5}{10} = 2.5 = 2\frac{1}{2}$

6. **0.99;**

$$\begin{array}{r} 12.11 \\ -\ 11.12 \\ \hline 0.99 \end{array}$$

7. a. $\frac{1}{4}$; there are 4 quarts in one gallon.

   b. **4 quarts**

   c. **16 quarts;** 4 × 4 = 16

8. $\frac{10}{15}$; $\frac{6}{15}$; $\frac{4}{15}$; we multiply $\frac{2}{3}$ by $\frac{5}{5}$ and $\frac{2}{5}$ by $\frac{3}{3}$. $\frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$ and $\frac{2}{5} \times \frac{3}{3} = \frac{6}{15}$. Then we add $\frac{5}{20}$ and $\frac{4}{20}$ to find their sum. $\frac{10}{15} + \frac{6}{15} = \frac{4}{15}$.

9. **0.5; $\frac{1}{2}$;** the number line is divided into 10 segments of $\frac{1}{10}$. The arrow is pointing at $\frac{5}{10}$ which is **0.5 or $\frac{1}{2}$.**

10. $\frac{1}{4} < 4$; $\frac{1}{2} \div 2 \bigcirc 2 \div \frac{1}{2}$

    $\frac{1}{2} \times \frac{1}{2} \bigcirc 2 \times \frac{2}{1}$

    $\frac{1}{4} < 4$

11. **20 millimeters;** 90 mm − 30 mm − 40 mm = 20 mm

12. $4\frac{1}{2}$; $3 \div \frac{2}{3}$

    $3 \times \frac{3}{2} = \frac{9}{2} = 4\frac{1}{2}$

13. $\frac{2}{9}$; $\frac{2}{3} \div 3$

    $\frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$

14. $1\frac{2}{5}$; $\frac{14}{10} = 1\frac{4}{10} = 1\frac{2}{5}$

15. **64.04;**

$$\begin{array}{r} 43.15 \\ 8.69 \\ 7.2 \\ +\ 5.0 \\ \hline 64.04 \end{array}$$

16. **\$1.09;** (\$10 − 19¢) ÷ 9

$$\begin{array}{r} \$\cancel{10}^{9}.\cancel{00}^{9} \\ -\$\ 0.19 \\ \hline \$\ 9.81 \end{array} \div 9$$

$$\begin{array}{r} \$1.09 \\ 9\overline{)\$9.81} \\ -9 \\ \hline 08 \\ -0 \\ \hline 81 \\ -81 \\ \hline 0 \end{array}$$

17. **\$4.32;**

$$\begin{array}{r} \$0.\overset{4}{7}\overset{1}{2} \\ \times\ \ 6 \\ \hline \$4.32 \end{array}$$

18. **1225;** $35 \times 35 = 1225$

19. **20 R 20;**

$$\begin{array}{r} 20 \text{ R } 20 \\ 24\overline{)500} \\ -48 \\ \hline 20 \\ -0 \\ \hline 20 \end{array}$$

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

21. **102;** $y = \frac{1224}{12}$;

$$\begin{array}{r} 102 \\ 12\overline{)1224} \\ -12 \\ \hline 02 \\ -0 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

22. $4\frac{1}{2}$; $5\frac{3}{4} - \left(3 - 1\frac{3}{4}\right)$

$$\downarrow$$

$$5\frac{3}{4} - \left(2\frac{4}{4} - 1\frac{3}{4}\right)$$

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

23. **5;** $4\frac{4}{4} = 5$

24. **30;** $\frac{3}{10} \times \frac{10}{10} = \frac{30}{100}$

25. a. $1\frac{1}{4}$ **inches;** $1\frac{2}{8}$ in. − $1\frac{1}{4}$ in.

b. **5 inches;** $1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4} = 4\frac{4}{4} = 5$

26. **8 in.;** $\sqrt{64}$ sq. in. = 8 in.

27. **10;** $\frac{1}{64} \times 640 = \frac{640}{64} = 10$

28. **34, 55, 89;** the next term in the sequence is the sum of the two previous terms.

29. a. **1, 2, 4, 8, 16, 32, 64**

b. **Odd;** there are 7 factors

c. **8**

d. **8;** check answer: $8 \times 8 = 64$

30. $\frac{13}{50}$

Early Finishers

a. $\frac{200}{4} = \frac{50}{1}$

b. **200 miles in 4 hours reduces to 50 miles in 1 hour, which means Mrs. Carter and her family traveled an average rate of 50 miles every hour.**

Lesson Practice 98

a. **−12°F**

b. **−5°F**

c. **9°C;** −5°C + 14°C = 9°C

d. **−8°C;** −5°C − 3°C = −8°C

e. **15°F**

f. **32;** $\frac{25 + 20 + 32 + 40 + 45 + 30 + 32}{7} = \frac{224}{7} = 32°F$

Written Practice 98

1. $\frac{2}{3}$; **I created the ratio 8 to 12 and reduced to** $\frac{2}{3}$.

2. a. **pyramid**

b. **5 faces**

3. **2.4 miles;** $2 \times 1.2 = 2.4$ miles

4. **−3°F;** 2°F − 5°F = −3°F

5. a. **D;** D is the only point greater than 2.

b. ***A***

6. **About 60 mph;** 5 + 10 + 45 = about 60 mph

7. **C**

8. **9.845;**
$$\begin{array}{r} 6.5 \\ 2.47 \\ +\ 0.875 \\ \hline 9.845 \end{array}$$

9. **28.16;**
$$\begin{array}{r} 4.26 \\ 8.0 \\ +\ 15.9 \\ \hline 28.16 \end{array}$$

10. **22.25;**
$$\begin{array}{r} 23.45 \\ -\ 1.2 \\ \hline 22.25 \end{array}$$

11. **0.267;**
$$\begin{array}{r} 0.367 \\ -\ 0.1 \\ \hline 0.267 \end{array}$$

12. **$8.75;**
$$\begin{array}{r} \$1.25 \\ \times\ \ 7 \\ \hline \$8.75 \end{array}$$

13. **456,000;**
$$\begin{array}{r} 750 \\ \times\ 608 \\ \hline 6000 \\ +\ 45000 \\ \hline 456{,}000 \end{array}$$

14. **22 R 12;**
$$\begin{array}{r} 22\ \text{R}\ 12 \\ 16\overline{)364} \\ -32 \\ \hline 44 \\ -32 \\ \hline 12 \end{array}$$

15. **$0.36;**
$$\begin{array}{r} \$0.36 \\ 20\overline{)\$7.20} \\ -60 \\ \hline 120 \\ -120 \\ \hline 0 \end{array}$$

16. **5;** $4\frac{2}{2} = 5$

17. $1\frac{1}{15}$

18. $4\frac{2}{3}$; $6 \longrightarrow 5\frac{3}{3}$
$$\begin{array}{r} -\ 1\frac{1}{3} \longrightarrow -\ 1\frac{1}{3} \\ \hline 4\frac{2}{3} \end{array}$$

19. $\frac{5}{7}$

20. **20;** $\frac{4}{5} \times 25 = \frac{100}{5} = 20$

21. $1\frac{1}{8}$; $\frac{3}{4} \div \frac{2}{3}$
$$\frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1\frac{1}{8}$$

22. **70;** $\frac{7}{10} \times \frac{10}{10} = \frac{70}{100}$

23. $\frac{3}{10}$; Divide top and bottom by 10.

24. a. **79°F;** each tick mark is two degrees. The temperature is between 78 and 80.

    b. **−1°F**

    c. **80°;** 79°F − (−1°F) = 79°F + 1°F = 80°F

25. **90;** 81 + 9 = 90

26. a. **1, 2, 5, 10;** the factors of 70 are 1, 2, 5, 7, 10, 14, 35, 70.
    The factors of 100 are 1, 2, 4, 5, 10, 20, 25, 50, 100.
    The common factors of 70 and 100 are 1, 2, 5, 10.

    b. $\frac{7}{10}$; The GCF of 70 and 100 is 10. $\frac{70}{100}$ can be reduced by dividing the top and bottom by 10. $\frac{70 \div 10}{100 \div 10} = \frac{7}{10}$

27. a. $\frac{1}{6} < \frac{1}{2}$

    b. $\frac{1}{6} < \frac{1}{3}$

28. **C**

29. **D;** 9 has the factors 1, 3, and 9.

30. **0.037, 0.367, 0.376, 0.38**

Early Finishers

a. **See student work.**

b. **14 feet**

Lesson Practice 99

a. **6.3;**
$$\begin{array}{r} 4.3 \\ +\ 2.0 \\ \hline 6.3 \end{array}$$

b. **13.2;**
$$\begin{array}{r} 12.0 \\ +\ 1.2 \\ \hline 13.2 \end{array}$$

c. **30.4;**
$$\begin{array}{r} {}^{1}6.4 \\ +\ 24.0 \\ \hline 30.4 \end{array}$$

d. **5.9;**
$$\begin{array}{r} 4.0 \\ 1.3 \\ +\ 0.6 \\ \hline 5.9 \end{array}$$

e. **7.95;**
$$\begin{array}{r} 5.20 \\ 0.75 \\ +\ 2.00 \\ \hline 7.95 \end{array}$$

f. **131.4;**
$$\begin{array}{r} {}^{1}56.0 \\ +\ 75.4 \\ \hline 131.4 \end{array}$$

g. **24.8;**
$$\begin{array}{r} {}^{1}8.0 \\ 4.7 \\ +\ 12.1 \\ \hline 24.8 \end{array}$$

h. **25.8;**
$$\begin{array}{r} {}^{1}9.0 \\ 4.8 \\ +\ 12.0 \\ \hline 25.8 \end{array}$$

i. **2.75;**
$$\begin{array}{r} 4.75 \\ -\ 2.00 \\ \hline 2.75 \end{array}$$

j. **7.4;**
$$\begin{array}{r} 12.4 \\ -\ 5.0 \\ \hline 7.4 \end{array}$$

k. **4;** the 6 in 16 is in the ones place. In 24.7 a decimal point separates the ones place and the tenths place, making the end of the whole number and the beginning of the fraction. So the 4 in 24.7 is in the same place as the 6 in 16.

l. **120 = 120**

Written Practice 99

1. **$\frac{6}{5}$;** $\frac{60}{50} = \frac{6}{5}$

2. **$\frac{1}{3}$; $33\frac{1}{3}\%$;** $\frac{2}{6} = \frac{1}{3} = 33\frac{1}{3}\%$

3. **\$2.40;** Step 1: Find the price of each pen.
$$\begin{array}{r} \$0.20 \\ 5\overline{)\$1.00} \\ -10 \\ \hline 00 \\ -0 \\ \hline 0 \end{array}$$
Step 2: Find the price of 12 pens.
$$\begin{array}{r} \$0.20 \\ \times\ 12 \\ \hline 040 \\ +\ 0200 \\ \hline \$2.40 \end{array}$$

4. **14.8 seconds;** 13.8 + 1.0 = 14.8 seconds

5. **3.5; $3\frac{1}{2}$;** The line is divided into 10 segments. The x is at **3.5 or $3\frac{1}{2}$.**

6. **100;** $n = \frac{100}{10} = 10$, so $n^2 = 10^2 = 10 \times 10 = 100$

7. **1620.3**

8. **About 21 sq. ft;** round 6 ft 10 in. to 7 ft and 2 ft 11 in. to 3 ft, then multiply 7 ft × 3 ft = 21 sq. ft

9. **$\frac{6}{8}$; $\frac{1}{8}$;** The fraction $\frac{3}{4}$ can be rewritten with a denominator of 8 as $\frac{6}{8}$. Subtract the fraction from $\frac{7}{8}$: $\frac{7}{8} - \frac{6}{8} = \frac{1}{8}$.

10. **\$7**

11. **54 mm;** 100 mm − 23 mm − 23 mm = 54 mm

12. **8.4;**
$$\begin{array}{r} 3.4 \\ +\ 5.0 \\ \hline 8.4 \end{array}$$

13. **0.25;**
$$\begin{array}{r} 7.25 \\ -\ 7.00 \\ \hline 0.25 \end{array}$$

14. **1;** 5 − 4 = 1

15. **3600;** 60 × 60 = 3600

16. **34;**
$$\begin{array}{r} 34 \\ 28\overline{)952} \\ -84 \\ \hline 112 \\ -112 \\ \hline 0 \end{array}$$

17. $2.03;

$$\begin{array}{r} \$\ 2.03 \\ 9\overline{)\$18.27} \\ -18 \\ \hline 02 \\ -0 \\ \hline 27 \\ -27 \\ \hline 0 \end{array}$$

18. $6\frac{1}{2}$; We add $4\frac{5}{8}$ and $1\frac{7}{8}$ to get $5\frac{12}{8}$. We convert the improper fraction $\frac{12}{8}$ to $1\frac{4}{8}$ and add it to the 5 to get $6\frac{4}{8}$. Finally, we reduce the fraction to get $\mathbf{6\frac{1}{2}}$.

19. $3\frac{2}{5}$; $5 - (2\frac{3}{5} - 1)$

$$5 - 1\frac{3}{5}$$

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

20. $\frac{1}{4}$; $\frac{3}{12} = \frac{1}{4}$

21. $\frac{1}{4}$; $\frac{3}{4} \div 3$

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

22. 90; $\frac{9}{10} \times \frac{10}{10} = \frac{90}{100}$

23. $\frac{1}{5}$; divide the top and bottom by 20.

24. a. Multiply the number of gallons by 128.

b. 1024 fluid ounces; $8 \times 128 = 1024$ fluid ounces

25. –10°F

26. 28, 39, 52; Step 1: Find the pattern of differences.

+1 +3 +5 +7

3, 4, 7, 12, 19

Step 2: Continue the pattern to find the next terms.

+9 +11 +13

19, 28, 39, 52

27. a. $\frac{1}{2}$; $\frac{3}{6} = \frac{1}{2}$

b. See student work.

28. $(2 \times 10^9) + (6 \times 10^8)$; In expanded notation, 2,600,000 is expressed like this: $(2 \times 1{,}000{,}000{,}000) + (6 \times 100{,}000{,}000)$. Using powers of 10, we replace 1,000,000,000 with 10^9, and we replace 100,000,000 with 10^8.

29. A

30. $\frac{3}{4}$; $\frac{3}{8} + \frac{3}{8} = \frac{6}{8} = \frac{3}{4}$

Lesson Practice 100

a. 3.2

b. 0.32

c. 32

d. 3.02

e. 10;

$$\begin{array}{r} {}^{1}\,{}^{1} \\ 3.65 \\ +\ 6.35 \\ \hline 10.00 \end{array} \longrightarrow 10$$

f. 3.7;

$$\begin{array}{r} {}^{1}\,{}^{1}{}^{2}\,{}^{1} \\ 2\cancel{3}.16 \\ -\ 19.46 \\ \hline 3.70 \end{array} \longrightarrow 3.7$$

g. 1.05;

$$\begin{array}{r} {}^{1}\,{}^{1} \\ 4.23 \\ -\ 3.18 \\ \hline 1.05 \end{array}$$

h. 2.50

i. 6.0; If we attach a zero to 6 without using a decimal point, we get 60, which does not equal 6. So we write the whole number 6 with a decimal point and then attach a zero.

Written Practice 100

1. $\frac{1}{3}$; $\frac{20}{60} = \frac{1}{3}$

2. $32.50; 100 rolls is 10 times as many rolls. $\$3.25 \times 10 = \$32.50$

3. 21 students; 75%; $\frac{3}{4} \times 28 = \frac{28}{4} =$ 21 students; $\frac{3}{4} = 0.75 = 75\%$

4. a. 10 pins

b. 6 small squares

5. **8.0;** if we attach a zero to 8 without using a decimal point, we get 80, which does not equal 8. So we write the whole number 8 with a decimal point and then attach a zero.

6. **a. D**

   b. B

7. **$\frac{10}{12}$; $\frac{9}{12}$; $\frac{1}{12}$;** we multiply $\frac{5}{6}$ by $\frac{2}{2}$ and $\frac{3}{4}$ by $\frac{3}{3}$. $\frac{5}{6} \times \frac{2}{2} = \frac{10}{12}$ and $\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$. Then we subtract $\frac{10}{12}$ and $\frac{9}{12}$ to find their difference. $\frac{10}{12} - \frac{9}{12} = \frac{1}{12}$.

8. **500 centimeters;** 1 meter is equal to 100 centimeters, so 5 meters is equal to $5 \times 100 = 500$ centimeters.

9. **80 mm;** *BC* and *CD* are both equal to 20 mm. *AD* is equal to 40 mm + 20 mm + 20 mm = 80 mm

10. **13.45;**

$$\begin{array}{r} 6.20 \\ 3.00 \\ +\ 4.25 \\ \hline 13.45 \end{array}$$

11. **900;**

$$10^3 - 10^2$$
$$(10 \times 10 \times 10) - (10 \times 10)$$
$$1000 - 100 = 900$$

12. **0.37;** $6.37 - 6.00 = 0.37$

13. **118.404;**

$$\begin{array}{r} {}^{1}{}^{2}{}^{2} \\ 234 \\ \times\ 506 \\ \hline 1404 \\ +\ 11700 \\ \hline 118{,}404 \end{array}$$

14. **$17.50;**

$$\begin{array}{r} \$1.75 \\ \times\ \ 10 \\ \hline \$17.50 \end{array}$$

15. **$1.75;**

$$\begin{array}{r} \$\ 1.75 \\ 10\overline{)\$17.50} \\ -10 \\ \hline 75 \\ -70 \\ \hline 50 \\ -50 \\ \hline 0 \end{array}$$

16. **2;** $\frac{1}{50} \times \frac{2}{2} = \frac{2}{100}$

17. **$\frac{2}{5}$;** $\frac{40}{100} \div \frac{20}{20} = \frac{2}{5}$

18. **8;** $8 \times 8 = 64$

19. **52;** $w = \frac{832}{16}$;

$$\begin{array}{r} 52 \\ 16\overline{)832} \\ -80 \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$$

20. **$1\frac{2}{3}$;** $\frac{15}{9} = 1\frac{6}{9} = 1\frac{2}{3}$

21. **$\frac{81}{100}$**

22. **$\frac{8}{9}$;** $\frac{2}{3} \div \frac{3}{4}$

$$\frac{2}{3} \times \frac{4}{3} = \frac{8}{9}$$

23. **4;** $3 \div \frac{3}{4}$

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

24. **30 feet;** 1 yard is equal to 3 feet, so 10 yards is equal to $10 \times 3 = 30$ feet

25. **183 calendar;** see calendar

26. **a. 6 faces**

    b. 12 edges

27. **–5°C**

28. **a. 13 children;** $7 + 6 = 13$

    b. 9 children

    c. Some children (8) have no siblings; $30 - 7 - 6 - 9 = 8$

29. **a. See student work.**

    b. A little more than 2 hours; a rate of 22 miles in 30 minutes is equal to a rate of 44 miles in 60 minutes and 88 miles in 120 minutes.

30. **430 miles;** $30 + \left(\frac{1}{2} \times 800\right) = 30 + \frac{800}{2} = 30 + 400 = 430$