Lesson Practice 61

a. $\overline{ML}$ **(or** $\overline{LM}$**)**

b. **30 cm;** The length of $\overline{JM}$ is equal to 10 cm ÷ 2 = 5 cm. This means the perimeter of the rectangle is:
$P = 2l + 2w$
$= 2(10 \text{ cm}) + 2(5 \text{ cm})$
$= 20 \text{ cm} + 10 \text{ cm} = 30 \text{ cm}$

c. **Segment** ***BC*****;** $\overline{BC}$ or $\overline{CB}$

d. **Ray** ***CD*****;** $\overrightarrow{CD}$

e. **Line** ***PQ*****;** $\overleftrightarrow{PQ}$ or $\overleftrightarrow{QP}$

f. $\angle DMA$

g. $\angle BMD$ **(or** $\angle DMB$**)**

h. $\overrightarrow{MB}$

i. Student should name one of the following:
$\angle CMD$ (or $\angle DMC$)
$\angle AMB$ (or $\angle BMA$)
$\angle AMC$ (or $\angle CMA$)
$\angle BMC$ (or $\angle CMB$)

Written Practice 61

1. **75 inches;** Convert 6 feet to inches by multiplying by 12, then add 3.
$(6 \times 12) + 3$
$72 + 3 = 75$ inches

2. **16**$\frac{2}{3}$**%;** $\frac{5}{6}$**;** $16\frac{4}{6} = 16\frac{2}{3}\%$;

$$6\overline{)100} \quad \begin{array}{r} -6 \\ \hline 40 \\ -36 \\ \hline 4 \end{array}$$

$1 - \frac{1}{6}$
$\frac{6}{6} - \frac{1}{6} = \frac{5}{6}$

3. **169 years;** 1959 − 1790 = 169 years

4. **7040;**

1000s	100s	10s	1s
7	0	4	0

→ 7040

5. **1200;** First round 56 to 60 and 23 to 20. Then multiply 60 by 20 to get 1200.

6. **D;** The numerator must be half of the denominator, but half of 98 is 49, not 48.

7. **1, 2, and 4;**
The factors of 12 are 1, 2, 3, 4, 6, and 12.
The factors of 16 are 1, 2, 4, 8, and 16.
The factors of 12 that are also the factors of 16 are 1, 2, and 4.

8. **96 inches;** 12 × 8 = 96 inches; An octagon has eight sides. The perimeter of an octagon is the length of one side multiplied by 8.

9. $\frac{4}{5}$**;** $1 - \frac{1}{5}$
$\frac{5}{5} - \frac{1}{5} = \frac{4}{5}$

10. $\frac{1}{4}$**;** $1 - \frac{3}{4}$
$\frac{4}{4} - \frac{3}{4} = \frac{1}{4}$

11. $2\frac{1}{3}$**;** $3\frac{3}{3} - 1\frac{2}{3} = 2\frac{1}{3}$

12. **1;** $\frac{1 + 2 + 3 + 4}{10} = \frac{10}{10} = 1$

13. **10;** $9\frac{4}{4} = 9 + \frac{4}{4} = 9 + 1 = 10$

14. **2479;**
$$\begin{array}{r} {}^{3}\cancel{4}{}^{1}\cancel{2}{}^{1}6\cancel{3} \\ -\ 1784 \\ \hline 2479 \end{array}$$

15. **$30.66;**
$$\begin{array}{r} {}^{4}\cancel{\$5}{}^{9}\cancel{0}{}^{9}.\cancel{0}{}^{1}0 \\ -\ \$19.34 \\ \hline \$30.66 \end{array}$$

16. **200;**
$$\begin{array}{r} {}^{3} \\ 58 \\ 39 \\ 24 \\ 16 \\ 52 \\ +\ 11 \\ \hline 200 \end{array}$$

17. **182,830;**
$$\begin{array}{r} {}^{3}{}^{3} \\ {}^{6}{}^{6} \\ 389 \\ \times\ 470 \\ \hline {}^{1}27230 \\ +\ 1556 \\ \hline 182{,}830 \end{array}$$

18. **605;**
$$9\overline{)5445} \quad \begin{array}{r} 605 \\ -54 \\ \hline 04 \\ -0 \\ \hline 45 \\ -45 \\ \hline 0 \end{array}$$

19. $4\frac{1}{6}$;

$$\begin{array}{r} 4\frac{1}{6} \\ 6\overline{)25} \\ -24 \\ \hline 1 \end{array}$$

20. 22 R 14;

$$\begin{array}{r} 22 \text{ R } 14 \\ 40\overline{)894} \\ -80 \\ \hline 94 \\ -80 \\ \hline 14 \end{array}$$

21. 31 R 13;

$$\begin{array}{r} 31 \text{ R } 13 \\ 30\overline{)943} \\ -90 \\ \hline 43 \\ -30 \\ \hline 13 \end{array}$$

22. 10,000; $(800 - 300) \times 20$

500×20

$$\begin{array}{r} 500 \\ \times \quad 20 \\ \hline 10{,}000 \end{array}$$

23. $3\frac{7}{10}$; The distance to the arrow is 3 plus a fraction. The distance between whole numbers on this number line is divided into tenths. The arrow is one section from 3, which is $3\frac{7}{10}$.

24. $\frac{10}{20}, \frac{20}{40}$

25. February

26. 40 mm; The sum of the lengths of the two shorter segments equals the length of the longest segment.

$$\begin{array}{rr} \text{length of segment } RS & 20 \text{ mm} \\ + \text{ length of segment } ST & + \quad l \\ \hline \text{length of segment } RT & 60 \text{ mm} \end{array}$$

This is a missing-addend problem. The missing addend is equal to 60 mm − 20 mm = 40 mm.

27. $\angle PWR$ (or $\angle RWP$)

28. 1912; Step 1: Find the year West Virginia became a state by adding 4 years to 1859.
1859 + 4 = 1863

Step 2: Find the year Arizona became a state by adding 49 years to 1863.
1863 + 49 = 1912

29. Use compatible numbers. Since 65 is close to 66 and 3 is a factor of 66, a reasonable estimate is 66 ÷ 3, or about 22 guests will be seated at each table.

30. a. 3 months

b. 8 months

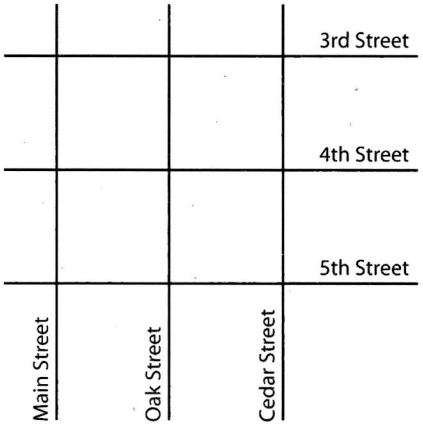
c. 17; This is the number of days that appears the most.

d. 18; This is the number of days in the middle of the data set.

e. 11; 22 − 11 = 11

Early Finishers

Sample:



Lesson Practice 62

a. 70 + 40 = 110

b. 40 × 20 = 800 or 40 = 25 = 1000

c. 600 + 300 = 900

d. 40 × 20 = 800

e. 90 − 30 = 60 or 95 − 25 = 70

f. 30 × 300 = 9000

g. 700 − 400 = 300

h. 60 ÷ 30 = 2

i. 700 − 500 = 200

j. 90 ÷ 30 = 3

k. $28 or $28.50; For each amount, if the number of cents is 50 or more, we round to the next dollar. If the number of cents is less than 50, we round down.
$13 + $7 + $8 = $28

l. 200 mm; The length, 57 mm, rounds to 60 mm. The width, 41 mm, rounds to 40.
60 mm + 40 mm + 60 mm + 40 mm = 200 mm

Written Practice 62

1. 52 fruit cups; Find the total number of fruit cups by multiplying 6 by 12, then subtracting the 20 left over to find the number eaten.
$(6 \times 12) - 20$
$72 - 20 = 52$ fruit cups

2. 10 centuries; sample: A century is 100 years, and 10 × 100 = 1000

3. 5 ounces; First find the total amount of water in all cups, then divide the total by the number of cups to find the equal amount for each cup.
$(4 + 7 + 7 + 2) \div 4$
$20 \div 4 = 5$ ounces

4. $\frac{2}{3}$; $66\frac{2}{3}\%$; 

5. 1600; First round 39 to 40 and 41 to 40, then multiply $40 \times 40 = 1600$.

6. $\frac{9}{10}$; $1 - \frac{1}{10}$

$\frac{10}{10} - \frac{1}{10} = \frac{9}{10}$

7. $\frac{5}{8}$; $1 - \frac{3}{8}$

$\frac{8}{8} - \frac{3}{8} = \frac{5}{8}$

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

9. 5; $4\frac{3}{3} = 4 + \frac{3}{3} = 4 + 1 = 5$

10. $6\frac{9}{10}$; $6\frac{10}{10} - \frac{1}{10} = 6\frac{9}{10}$

11. 6; For the sum to equal zero, the numerator must be 6 in order to convert the number 7 to 8.

12. 900; $600 + 300 = 900$

13. 265,903;

$$\begin{array}{r} {\scriptstyle 2\,2\;\;2\,2} \\ 89{,}786 \\ 26{,}428 \\ 57{,}814 \\ +\,91{,}875 \\ \hline 265{,}903 \end{array}$$

14. $17,391;

$$\begin{array}{r} {\scriptstyle 2\,1\,4\;\;9\,1} \\ \$35{,}042 \\ -\,\$17{,}651 \\ \hline \$17{,}391 \end{array}$$

15. 169,488;

$$\begin{array}{r} {\scriptstyle 2\;\;2} \\ {\scriptstyle 1\,7\;\;1\,4} \\ 428 \\ \times\ 396 \\ \hline {\scriptstyle 1\,1} \\ 2568 \\ 38520 \\ +\ 128400 \\ \hline 169{,}488 \end{array}$$

16. 947; $y = \frac{4735}{5}$

$$\begin{array}{r} 947 \\ 5\overline{)4735} \\ -45 \\ \hline 23 \\ -20 \\ \hline 35 \\ -35 \\ \hline 0 \end{array}$$

17. 207,088; $8 \times 43 \times 602$

$$\begin{array}{r} {\scriptstyle 2} \\ 43 \\ \times\ 8 \\ \hline 344 \end{array} \qquad \begin{array}{r} {\scriptstyle 2\,2} \\ 344 \\ \times\ 602 \\ \hline {\scriptstyle 1} \\ 688 \\ +\ 20640 \\ \hline 207{,}088 \end{array}$$

18. $1\frac{7}{8}$;

$$\begin{array}{r} 1\frac{7}{8} \\ 8\overline{)15} \\ -8 \\ \hline 7 \end{array}$$

19. 16 R 7;

$$\begin{array}{r} 16\text{ R }7 \\ 60\overline{)967} \\ -60 \\ \hline 367 \\ -360 \\ \hline 7 \end{array}$$

20. 21 R 35;

$$\begin{array}{r} 21\text{ R }35 \\ 40\overline{)875} \\ -80 \\ \hline 75 \\ -40 \\ \hline 35 \end{array}$$

21. a. See student work.

b. See student work.

c. See student work.

22. $22.46;
$100 − ($24 + $43.89 + $8.67 + $0.98)
$100 − $77.54 = $22.46

23. C; The perimeter of a square is 4 times the length of one side, which is 15 mm.
4 × 15 = 60 mm

24. 0; When the numbers 0, 2, 4, 6, or 8 are multiplied by 5, the product ends in 0.

25. 12:50 p.m.; 9:30 + 3:20 = 12:50

26. a. 1, 2, 3

b. $\frac{1}{2}$; Sector 3 makes up $\frac{1}{2}$ of the spinner.

c. $\frac{1}{4}$; Sector 1 makes up $\frac{1}{4}$ of the spinner.

27. $\angle WMZ$ (or $\angle ZMW$)

28. 130 + 130 + 30 + 30 = 320 in. or 100 + 100 + 30 + 30 = 260 in.

29. $12\frac{1}{2}$; 25 ÷ 2

$$\begin{array}{r} 12\frac{1}{2} \\ 2\overline{)25} \\ \underline{-2} \\ 05 \\ \underline{-4} \\ 1 \end{array}$$

30. 9:00 a.m.; New York City is 3 hours ahead of Los Angeles. 3 hours before noon is 9 a.m.

Early Finishers

About 4200 times; about 100,000 times; First round 72 to 70 and multiply by 60 minutes to find the number in one hour. 70 × 60 = 4200 times. Then round 4200 to 4000 and 24 hours to 25 hours to find the number in one day. 4000 × 25 = 100,000 times.

Lesson Practice 63

a. $3\frac{3}{4}$; We think of 4 as being 3 + 1 which we can rewrite as $3\frac{4}{4}$. Now we can subtract.

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

↓

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

b. $2\frac{1}{4}$; We think of 3 as being 2 + 1 which we can rewrite as $2\frac{4}{4}$. Now we can subtract.

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

↓

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

c. $1\frac{3}{4}$; We think of 4 as being 3 + 1 which we can rewrite as $3\frac{4}{4}$. Now we can subtract.

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

↓

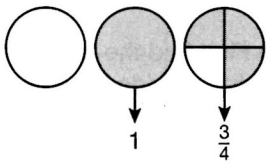
$3\frac{4}{4} - 2\frac{1}{4} = 1\frac{3}{4}$

d. $1\frac{3}{4}$; See student work.

e. $2\frac{1}{2}$; See student work.

f. $4\frac{1}{3}$; See student work.

g. Sample:



$1\frac{1}{4}$ pies remain.

Written Practice 63

1. 59 cm; Step 1: Find the total length of the first two pieces.
7 cm + 34 cm = 41 cm

Step 2: Subtract the length of the first two pieces from the total.
100 cm − 41 cm = 59 cm

2. $4\frac{1}{2}$ inches; Subtract $1\frac{1}{2}$ from 6 by thinking of 6 as 5 + 1, which we can rewrite as $5\frac{2}{2}$.

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

↓

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

3. 20 quarter-pound hamburgers; 5 × 4 = 20

4. 21 books; Find the total number of books and divide by the number of stacks to find the equal number for each stack.
(18 + 19 + 24 + 23) ÷ 4
84 ÷ 4 = 21 books

5. 900; Round 398 to 400 and 487 to 500, then add 400 + 500 = 900.

6. 1 and 7;
The factors of 14 are 1, 2, 7, and 14.
The factors of 21 are 1, 3, 7, and 21.
The factors of 14 that are the same as 21 are 1 and 7.

7. C

8. 12,202,500;

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1} \\ 5{,}284{,}000 \\ +\ 6{,}918{,}500 \\ \hline 12{,}202{,}500 \end{array}$$

9. $6\frac{2}{3}$; Think of 7 as 6 + 1, which we can rewrite as $6\frac{3}{3}$.

$$7 - \tfrac{1}{3}$$
$$\downarrow$$
$$6\tfrac{3}{3} - \tfrac{1}{3} = 6\tfrac{2}{3}$$

10. $3\frac{1}{2}$; Think of 6 as 5 + 1, which we can rewrite as $5\frac{2}{2}$.

$$6 - 2\tfrac{1}{2}$$
$$\downarrow$$
$$5\tfrac{2}{2} - 2\tfrac{1}{2} = 3\tfrac{1}{2}$$

11. $4\frac{1}{4}$; Think of 8 as 7 + 1, which we can rewrite as $7\frac{4}{4}$.

$$8 - 3\tfrac{3}{4}$$
$$\downarrow$$
$$7\tfrac{4}{4} - 3\tfrac{3}{4} = 4\tfrac{1}{4}$$

12. 1; $\frac{8}{9} + \left(\frac{2}{9} - \frac{1}{9}\right)$

$$\tfrac{8}{9} + \quad \tfrac{1}{9} \quad = \tfrac{9}{9} = 1$$

13. 1; $5\frac{3}{4} - \left(3\frac{2}{4} + 1\frac{1}{4}\right)$

$$5\tfrac{3}{4} - \quad 4\tfrac{3}{4} \quad = 1$$

14. 24,179;

$$\begin{array}{r} {\scriptstyle 3\ 6^{1}0} \\ \cancel{43{,}716} \\ -\ 19{,}537 \\ \hline 24{,}179 \end{array}$$

15. $5454.78;

$$\begin{array}{r} {\scriptstyle 6\ 4} \\ {\scriptstyle 7\ 6} \\ {\scriptstyle 3\ 2} \\ \$6.87 \\ \times\ 794 \\ \hline {\scriptstyle 1\ 2}\ 2748 \\ 61830 \\ +\ 480900 \\ \hline \$5454.78 \end{array}$$

16. $1.84;

$$\begin{array}{r} \$\ 1.84 \\ 8\overline{)\$14.72} \\ -8 \\ \hline 67 \\ -64 \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$$

17. $2\frac{2}{9}$;

$$\begin{array}{r} 2\frac{2}{9} \\ 9\overline{)20} \\ -18 \\ \hline 2 \end{array}$$

18. 47 R 11;

$$\begin{array}{r} 47\text{ R }11 \\ 20\overline{)951} \\ -80 \\ \hline 151 \\ -140 \\ \hline 11 \end{array}$$

19. 51 R 10;

$$\begin{array}{r} 51\text{ R }10 \\ 50\overline{)2560} \\ -250 \\ \hline 60 \\ -50 \\ \hline 10 \end{array}$$

20. 40,000; $50 \times (400 + 400)$

$$50 \times \quad 800$$

$$\begin{array}{r} 800 \\ \times\ 50 \\ \hline 40{,}000 \end{array}$$

21. 20; $(400 + 400) \div 40$

$$800 \quad \div 40 = 20$$

22. 8014;

$$\begin{array}{r} {\scriptstyle 2\ 2\ 2} \\ 4736 \\ 2849 \\ 351 \\ +\ 78 \\ \hline 8014 \end{array}$$

23. $\frac{5}{8}$; $62\frac{1}{2}\%$; $1 - \frac{3}{8}$

$$\downarrow$$
$$\tfrac{8}{8} - \tfrac{3}{8} = \tfrac{5}{8};$$

$\frac{1}{8}$ is equal to $12\frac{1}{2}\%$, so $\frac{5}{8}$ is equal to:

$5 \times 12\frac{1}{2}\% = 62\frac{1}{2}\%$

24. $\frac{5}{12}$, $\frac{5}{10}$, $\frac{5}{8}$

25. 60 mm; The perimeter is equal to 3 times the length of one side, which is equal to 20 mm.
$P = 3 \times 20\text{ mm} = 60\text{ mm}$

26. a. 150 lb (chimpanzee), 450 lb (gorilla), 950 lb (horse), 1100 lb (saltwater crocodile).

b. About 3 times greater; 450 ÷ 3 = 150

c. A saltwater crocodile and a horse

27. About 6°F; 99°F − 93°F = 6°F

28. Acute angle

29. Use compatible numbers; since 4 is a factor of 36, 4 is also a factor of 360, and 360 ÷ 4 = 90.

30. About 86%; 39% + 24% + 23% = 86%

Lesson Practice 64

a. Ones; The 5 is in the first place to the left of the decimal point, which is the ones place. This is reasonable because 5 shows the number of dollars in the ones place.

b. Tens; The 5 is in the second place to the left of the decimal point, which is the tens place. This is reasonable because 5 shows the number of dollars in the tens place.

c. Hundredths; The 5 is in the second place to the right of the decimal point, which is the hundredths place. This is reasonable because 5 shows the number of pennies, and a penny is a hundredth of a dollar.

d. Tenths; The 5 is in the first place to the right of the decimal point, which is the tenths place. This is reasonable because 5 shows the number of dimes and a dime is a tenth of a dollar.

e. 3 dollars, 8 dimes, 4 pennies; The digits in the number $3.84 show us how many of each bill or coin to use. We use 3 dollars, 8 dimes, and 4 pennies.

f. $12.60; We round $12.63 to the nearest ten cents, that is, to the tenths place. Since 3 cents is less than half a dime, $12.63 rounds down to $12.60.

g. $6.10; We round $6.08 to the nearest ten cents, that is, to the tenths place. Since 8 cents is more than half a dime, $6.08 rounds up to $6.10.

h. Sample: $1.49 is close to $1.50, so $1.50 + $1.50 + $1.50, or $4.50, is a reasonable estimate of the total cost.

Written Practice 64

1. 370,000;

$$\begin{array}{r} {\scriptstyle 1\,1\ \ 1\,1} \\ 116{,}521 \\ +253{,}479 \\ \hline 370{,}000 \end{array}$$

2. $12.78;

$$\begin{array}{rl} & {\scriptstyle 2\,9\ \ {}^{1}5_{1}} \\ \$\cancel{3}0.\cancel{6}3 & \text{Find what she needs} \\ -\ \$17.85; & \text{by subtracting what she} \\ \$12.78 & \text{has from the total.} \end{array}$$

3. 459 seats; First find the total number of seats, then subtract the empty seats to find the number of filled seats.

$(30 \times 16) - 21$

$$\begin{array}{r} {\scriptstyle 1\ \ } \\ 16 \\ \times\ 30 \\ \hline 480 \end{array}$$

$480 - 21 = 459$ seats

4. 54 hours;

$$\begin{array}{r} 54 \text{ hours} \\ 6\overline{)324} \\ -30 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

5. 3500; Round 68 to 70 and 52 to 50, then multiply $70 \times 50 = 3500$.

6. $\frac{7}{10}$; 70%; $1 - \frac{3}{10}$

$$\frac{10}{10} - \frac{3}{10} = \frac{7}{10};\ \frac{7}{10} = 70\%$$

7. 2 decimal places

8. 3 dollars, 2 dimes, 5 pennies; The digits in the number $3.25 show us how many of each bill or coin to use. We use 3 dollars, 2 dimes, and 5 pennies.

9. $4.80; We round $4.82 to the nearest ten cents, that is, to the tenths place. Since 2 cents is less than half a dime, $4.82 rounds down to $4.80.

10. $3\frac{1}{8}$;

$$\begin{array}{r} 3\frac{1}{8} \\ 8\overline{)25} \\ -24 \\ \hline 1 \end{array}$$

11. 1, 2, 5, and 10;
The factors of 20 are 1, 2, 4, 5, 10, and 20.
The factors of 30 are 1, 2, 3, 5, 6, 15, and 30.
The factors of 20 that are the same as 30 are 1, 2, 5, and 10.

12. 10:30 a.m.; 12:00 − 1:30 = 10:30

13. 207; $a = 360 - 153$

$$\begin{array}{r} {}^{5}\cancel{3}\cancel{6}0 \\ -\ 153 \\ \hline 207 \end{array}$$

14. 175; $m = \frac{875}{5}$;

$$\begin{array}{r} 175 \\ 5\overline{)875} \\ \underline{-5} \\ 37 \\ \underline{-35} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

15. $\frac{2}{5}$; $f = 1 - \frac{3}{5}$

$$\downarrow$$

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

16. 0; $z = \frac{5}{5} - \frac{3}{3}$

$$\downarrow \quad \downarrow$$

$$1 - 1 = 0$$

17. $5.08;

$$\begin{array}{r} \$\ 5.08 \\ 6\overline{)\$30.48} \\ \underline{-30} \\ 04 \\ \underline{-0} \\ 48 \\ \underline{-48} \\ 0 \end{array}$$

18. 26 R 26;

$$\begin{array}{r} 26\text{ R }26 \\ 60\overline{)1586} \\ \underline{-120} \\ 386 \\ \underline{-360} \\ 26 \end{array}$$

19. $26.53;

$$\begin{array}{r} \$4.{}^{2}\cancel{3}4 \\ \$0.26 \\ \$5.58 \\ \$9.47 \\ \$6.23 \\ +\ \$0.65 \\ \hline \$26.53 \end{array}$$

20. 0; Any combination of numbers multiplied by 0 will always result in 0.

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

$$\begin{array}{r} 7 \rightarrow 6\frac{3}{3} \\ -\ 3\frac{2}{3} \rightarrow 3\frac{2}{3} \\ \hline 3\frac{1}{3} \end{array}$$

22. 4;

$$\begin{array}{r} 1\frac{1}{3} \\ +\ 2\frac{2}{3} \\ \hline 3\frac{3}{3} \rightarrow 3 + 1 = 4 \end{array}$$

23. $\frac{1}{4}$;

$$\begin{array}{r} 4 \rightarrow 3\frac{4}{4} \\ -\ 3\frac{3}{4} \rightarrow 3\frac{3}{4} \\ \hline \frac{1}{4} \end{array}$$

24. 60 mm; The perimeter of a regular pentagon is equal to 5 times the length of one side.
5 × 12 mm = 60 mm.

25. a. 1;

$$\begin{array}{r} 3\text{ R }1 \\ 3\overline{)10} \\ \underline{-9} \\ 1 \end{array}$$

b. 1;

$$\begin{array}{r} 33\text{ R }1 \\ 3\overline{)100} \\ \underline{-9} \\ 10 \\ \underline{-9} \\ 1 \end{array}$$

26. $3\frac{3}{4}$ in.; The perimeter of the triangle is equal to 3 times the length of one side, which is equal to $1\frac{1}{4}$ inches. $3 \times 1\frac{1}{4} = 3\frac{3}{4}$ inches.

27. $\frac{2}{7}$; The letters T and R follow Q in the alphabet.

28. See student work.

29. 64°; Find Tuesday's temperature by subtracting 7° from Wednesday's temperature. 59° − 7° = 52°. Then find Monday's temperature by adding 12° to Tuesday's temperature. 52° + 12° = 64°.

30. Sample: $3.49 is about $3.50, and $3.50 + $3.50 is $7. Since the cost of two pucks is about $7, the cost of six pucks is about $7 + $7 + $7, or $21.

Early Finishers

By using compatible numbers to the nearest half-dollar, I found that Jason earned about $25.50 + $35.50 + $30, or about $91.

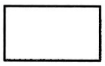
Lesson Practice 65

a. **A;** A car is longer than 1 meter.

b. **1.43 m;** Since 10 centimeters equals 1 decimeter, we can think of 43 centimeters as 4 decimeters plus 3 centimeters. So Alonso's height was 1 meter plus 4 decimeters plus 3 centimeters. We can use a decimal number to write Alonso's height in meters. Alonso's height is 1.43 meters.

c. **3 decimeters;** Ten centimeters equals one decimeter, so 30 centimeters equals 3 decimeters.

Written Practice 65

1. **Sample:** 

2. **15 players;** First find the total number of players, then divide the total by 8 to find the equal number for each team.

$(10 \times 12) \div 8$

$120 \div 8$

$$\begin{array}{r} 15 \text{ players} \\ 8\overline{)120} \\ -8 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

3. **100 + 40 + 100 + 40 = 280 yards;** $P = L + W + L + W$

4. **9 inches;** $\frac{1}{4} = 25\%$; $36 \div 4 = 9$

5. **45 minutes**

6. **1500;** First round 672 to 700 and 830 to 800, then add 700 + 800 = 1500.

7. a. $\frac{1}{10}$

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

   c. $\frac{1}{10} + \frac{9}{10} = \frac{10}{10} = 1$

8. **1.32 m;** Since 10 centimeters equals 1 decimeter, we think of 32 centimeters as 3 decimeters plus 2 centimeters. So the height of the refrigerator is 1 meter plus 3 decimeters plus 2 centimeters. We can use a decimal number to write the height of the refrigerator in meters. The height is 1.32 m.

9. **5 decimeters;** A meter is equal to 10 decimeters, so half of a meter is equal to 5 decimeters.

10. $\frac{3}{8}, \frac{5}{10}, \frac{2}{3}, \frac{4}{4}$

11. **4 different factors;** The factors of 10 are 1, 2, 5, and 10

12. $3\frac{3}{4}$;

$$\begin{array}{r} 3\frac{3}{4} \\ 4\overline{)15} \\ -12 \\ \hline 3 \end{array}$$

13. **543;** For the number to be odd, either 3 or 5 must be the last digit. For the number to be the greatest odd number, 5 must be first and 3 must be last.

14. **105;** 500 − 395 = 105

15. **96,005;**

$$\begin{array}{r} {\scriptstyle 1\,1\;2\,1} \\ 36{,}195 \\ 17{,}436 \\ +\ 42{,}374 \\ \hline 96{,}005 \end{array}$$

16. **1,483;**

$$\begin{array}{r} {\scriptstyle 3\,10\;9\,1} \\ \cancel{41{,}026} \\ -\ 39{,}543 \\ \hline 1{,}483 \end{array}$$

17. **291,232;**

$$\begin{array}{r} {\scriptstyle 3\;5} \\ 608 \\ \times\ 479 \\ \hline {\scriptstyle 1\,1\;1\;1} \\ 5{,}472 \\ 42{,}560 \\ +\ 243{,}200 \\ \hline 291{,}232 \end{array}$$

18. **659 R 1;**

$$\begin{array}{r} 659 \text{ R } 1 \\ 4\overline{)2637} \\ -24 \\ \hline 23 \\ -20 \\ \hline 37 \\ -36 \\ \hline 1 \end{array}$$

19. $0.84;

$$\begin{array}{r} \$0.84 \\ 40\overline{)\$33.60} \\ -32\,0 \\ \hline 1\,60 \\ -1\,60 \\ \hline 0 \end{array}$$

20. 168;

$$\begin{array}{r} 168 \\ 20\overline{)3360} \\ -20 \\ \hline 136 \\ -120 \\ \hline 160 \\ -160 \\ \hline 0 \end{array}$$

21. 9;

$$\begin{array}{r} 3\frac{3}{8} \\ +\,5\frac{5}{8} \\ \hline 8\frac{8}{8} \end{array} \longrightarrow 8 + \frac{8}{8} = 8 + 1 = 9$$

22. $1\frac{5}{8}$; $5 \longrightarrow 4\frac{8}{8}$

$$\begin{array}{r} -\,3\frac{3}{8} \longrightarrow 3\frac{3}{8} \\ \hline 1\frac{5}{8} \end{array}$$

23. $\frac{3}{4}$; $3\frac{3}{4} - 3 = \frac{3}{4}$

24. 5040; $6 \times 42 \times 20$

$$\begin{array}{r} {\scriptstyle 1}42 \\ \times\ 6 \\ \hline 252 \end{array}$$

$$\begin{array}{r} 252 \quad \times 20 \\ {\scriptstyle 1}252 \\ \times\ 20 \\ \hline 5040 \end{array}$$

25. $2.37; $\$20 - (\$5.63 + \$12)$

$$\$20 - \$17.63$$

$$\begin{array}{r} \$2{\scriptstyle 1}0{\scriptstyle 9}.0{\scriptstyle 9}0 \\ -\,\$17.63 \\ \hline \$\ 2.37 \end{array}$$

26. 30 eggs; $(2 \times 12) + \left(\frac{1}{2} \times 12\right)$

$$24 \quad + \quad 6 \quad = 30 \text{ eggs}$$

27. 1080 is divisible by all six listed numbers; The last digit is zero so the number is divisible by 2, 5, and 10. The sum of digits is 9 so the number is also divisible by 3 and 9. Because the number is divisible by 2 and 3, it is also divisible by 6.

28. a. $\frac{2}{4}$ **or** $\frac{1}{2}$

b. $\frac{3}{4}$

c. 1 or $\frac{4}{4}$

29. About 20°F cooler; 104°F − 84°F = 20°F

30. 15 minutes; Adolfo studied for $60 \div 2 = 30$ minutes. Shaun studied for $30 \div 2 = 15$ minutes.

Lesson Practice 66

a. 288 mm, 28.8 cm; Answers should be within the range of 278–288 mm (27.8–28.8 cm).

b. See student work; Standard copy page is 216 mm, 21.6 cm.

c. 25 mm, 2.5 cm

d. 33 mm, 3.3 cm

e. 18 mm, 1.8 cm

f. 0.1; The distance from 0 to 1 is divided into ten segments. The arrow indicates a point one tenth greater than 0, which is 0.1.

g. 0.9; The distance from 0 to 1 is divided into ten segments. The arrow indicates a point nine tenths greater than 0, which is 0.9.

h. 1.5; The distance from 1 to 2 is divided into ten segments. The arrow indicates a point five tenths greater than 1, which is 1.5.

i. 2.2; The distance from 2 to 3 is divided into ten segments. The arrow indicates a point two tenths greater than 2, which is 2.2.

j. 2.8; The distance from 2 to 3 is divided into ten segments. The arrow indicates a point eight tenths greater than 2, which is 2.8.

k. 3.4; The distance from 3 to 4 is divided into ten segments. The arrow indicates a point four tenths greater than 3, which is 3.4.

l. $\frac{1}{10}$, $\frac{9}{10}$, $1\frac{5}{10}$, $2\frac{2}{10}$, $2\frac{8}{10}$, $3\frac{4}{10}$