26. $3 \times 4 \times 5 = 60$

$0.60 \longrightarrow \mathbf{0.06}$

27. $3\frac{1}{2} = 3\frac{2}{4}$

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

$4\frac{5}{4} = 5\frac{1}{4}$

$4 \longrightarrow 3\frac{8}{8}$

$-\ 3\frac{1}{8} \qquad -\ 3\frac{1}{8}$

$\frac{7}{8}$

$5\frac{1}{4} \div \frac{7}{8} = \frac{21}{4} \div \frac{7}{8} = \frac{\overset{3}{\cancel{21}}}{\underset{1}{\cancel{4}}} \times \frac{\overset{2}{\cancel{8}}}{\underset{1}{\cancel{7}}} = \mathbf{6}$

28. $36.45 - 4.912$

$\downarrow \qquad \downarrow$

$36 \quad - \quad 5 = \mathbf{31}$

$3\overset{5}{\cancel{6}}.{}^{1}4\ \overset{4}{\cancel{5}}{}^{1}0$

$-\ \ 4.912$

$\mathbf{31.538}$

29. 4.2×0.9

$\downarrow \qquad \downarrow$

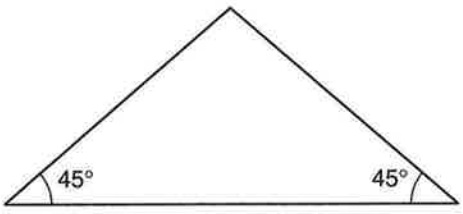
$4 \times 1 = \mathbf{4}$

4.2

$\times\ 0.9$

$\mathbf{3.78}$

30.



LESSON 36, LESSON PRACTICE

a. $\frac{\text{big fish}}{\text{little fish}} = \frac{90}{240} = \mathbf{\frac{3}{8}}$

b. $\begin{array}{r} 14 \text{ girls} \\ +\ ?\text{ boys} \\ \hline 30 \text{ total} \end{array} \longrightarrow \begin{array}{r} 14 \text{ girls} \\ +\ 16 \text{ boys} \\ \hline 30 \text{ total} \end{array}$

$\frac{\text{boys}}{\text{girls}} = \frac{16}{14} = \mathbf{\frac{8}{7}}$

c. $\begin{array}{r} 3 \text{ won} \\ +\ ?\text{ lost} \\ \hline 8 \text{ total} \end{array} \longrightarrow \begin{array}{r} 3 \text{ won} \\ +\ 5 \text{ lost} \\ \hline 8 \text{ total} \end{array}$

$\frac{\text{won}}{\text{lost}} = \mathbf{\frac{3}{5}}$

d. $\begin{array}{r} 5 \text{ red marbles} \\ +\ 3 \text{ blue marbles} \\ \hline 8 \text{ total} \end{array}$

$\frac{\text{blue marbles}}{\text{total marbles}} = \mathbf{\frac{3}{8}}$

e. $\frac{3}{6} = \mathbf{\frac{1}{2}}$

f. $\mathbf{\frac{1}{4}}$

g. $\frac{0}{4} = \mathbf{0}$

h. $\frac{4}{4} = \mathbf{1}$

i. $\frac{2}{4} = \mathbf{\frac{1}{2}}$

j. $\mathbf{\frac{3}{4}}$

LESSON 36, MIXED PRACTICE

1. $\begin{array}{r} 14 \text{ girls} \\ +\ ?\text{ boys} \\ \hline 32 \text{ total} \end{array} \longrightarrow \begin{array}{r} 14 \text{ girls} \\ +\ 18 \text{ boys} \\ \hline 32 \text{ total} \end{array}$

$\frac{\text{boys}}{\text{girls}} = \frac{18}{14} = \mathbf{\frac{9}{7}}$

2. $23 \text{ inches} + 21 \text{ inches} + 16 \text{ inches} = 60 \text{ inches}$

$3\overline{)60 \text{ inches}}$

$\mathbf{20 \text{ inches}}$

3. $35 \text{ pages} \times 7$

$\mathbf{245 \text{ pages}}$

4.
$$\begin{array}{r} 59.48 \text{ seconds} \\ -\ 56.24 \text{ seconds} \\ \hline \textbf{3.24 seconds} \end{array}$$

5. $40\% = \frac{40}{100} = \frac{\mathbf{2}}{\mathbf{5}}$

	30 players
$\frac{2}{5}$ had never played rugby.	6 players
	6 players
$\frac{3}{5}$ had played rugby.	6 players
	6 players
	6 players

(a) 2×6 players = **12 players**

(b) $\frac{\text{had played}}{\text{had not played}} = \frac{\mathbf{3}}{\mathbf{2}}$

6. **One way to find *BC* in millimeters is to first convert *AB* to 40 mm and *AC* to 95 mm. Then subtract 40 mm from 95 mm.**

7. (a) Area = (8 cm)(13 cm) = **104 cm²**

(b) Perimeter = 8 cm + 8 cm + 13 cm + 13 cm = **42 cm**

8.
$$\begin{array}{r} 3600 \\ 2900 \\ +\ \ 900 \\ \hline \textbf{7400} \end{array}$$

9. (a) $6.857\underline{1}42 \longrightarrow$ **6.857**

(b) $6.8571420 \longrightarrow 7$
$1.9870 \longrightarrow 2$
$7 \times 2 =$ **14**

10. (a) **12,000,000**

(b) **0.000012**

11.
$$\begin{array}{r} 3 \text{ red marbles} \\ 4 \text{ white marbles} \\ +\ 5 \text{ blue marbles} \\ \hline 12 \text{ total} \end{array}$$

(a) $\frac{\text{red marbles}}{\text{total marbles}} = \frac{3}{12} = \frac{\mathbf{1}}{\mathbf{4}}$

(b) $\frac{\text{white marbles}}{\text{total marbles}} = \frac{4}{12} = \frac{\mathbf{1}}{\mathbf{3}}$

(c) $\frac{\text{blue marbles}}{\text{total marbles}} = \frac{\mathbf{5}}{\mathbf{12}}$

(d) $\frac{\text{green marbles}}{\text{total marbles}} = \frac{0}{12} = \mathbf{0}$

12. (a) **4.2 cm**

(b) **42 mm**

13. **13.56**

14. (a) $85\% = \frac{85}{100} = \frac{\mathbf{17}}{\mathbf{20}}$

(b) $\frac{144}{600} = \frac{\overset{1}{\cancel{2}} \cdot \overset{1}{\cancel{2}} \cdot \overset{1}{\cancel{2}} \cdot 2 \cdot \overset{1}{\cancel{3}} \cdot 3}{\underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{3}} \cdot 5 \cdot 5} = \frac{\mathbf{6}}{\mathbf{25}}$

15. Estimate: $\mathbf{6\frac{3}{4}}$ **hr** or **7 hr**
$8 per hour
$\$8 \times 7 \text{ hr} = \$56$
She earned a little less than $56.

16. (a) $\angle MPN$ (or $\angle NPM$)

(b) $\angle LPM$ (or $\angle MPL$)

(c) $\angle LPN$ (or $\angle NPL$)

17. $8y = 12^2$
$8y = 144$

$$8\overline{)144} \quad \begin{array}{r} 18 \\ 8 \\ \hline 64 \\ 64 \\ \hline 0 \end{array}$$

$y =$ **18**

18.
$$\begin{array}{r} 1.2 \\ \times\ \ 4 \\ \hline 4.8 \end{array}$$
$w =$ **4.8**

19. $4.27 + 16.3 + 10$
$\downarrow \quad \downarrow \quad \downarrow$
$4 + 16 + 10 =$ **30**

$$\begin{array}{r} {\scriptstyle 1}4.27 \\ 16.3 \\ +\ 10. \\ \hline \textbf{30.57} \end{array}$$

20. $4.2 - 0.42$
$\downarrow \quad \downarrow$
$4 - 0 =$ **4**

$$\begin{array}{r} {\scriptstyle 3\ \ 1}\ \ {\scriptstyle 1} \\ 4.\ \cancel{2}0 \\ -\ 0.\ 4\ 2 \\ \hline \textbf{3.\ 7\ 8} \end{array}$$

21.
$$\begin{array}{r} 3\frac{1}{2} = 3\frac{6}{12} \\ 1\frac{1}{3} = 1\frac{4}{12} \\ +\ 2\frac{1}{4} = 2\frac{3}{12} \\ \hline 6\frac{13}{12} = \mathbf{7\frac{1}{12}} \end{array}$$

22. $3\frac{1}{2} \cdot 1\frac{1}{3} \cdot 2\frac{1}{4}$

$$= \frac{7}{2} \cdot \frac{\cancel{4}^{1}}{\cancel{3}_{1}} \cdot \frac{\cancel{9}^{3}}{\cancel{4}_{1}} = \frac{21}{2} = \mathbf{10\frac{1}{2}}$$

23.
$$\begin{array}{r} \frac{2}{3} = \frac{4}{6} \\ -\ \frac{1}{2} = \frac{3}{6} \\ \hline \frac{1}{6} \end{array}$$

$$3\frac{5}{6} - \frac{1}{6} = 3\frac{4}{6} = \mathbf{3\frac{2}{3}}$$

24.
$$\begin{array}{r} 8\frac{5}{12} = 8\frac{5}{12} \\ -\ 3\frac{2}{3} = 3\frac{8}{12} \\ \hline \end{array} \longrightarrow \begin{array}{r} 7\frac{17}{12} \\ -\ 3\frac{8}{12} \\ \hline 4\frac{9}{12} = \mathbf{4\frac{3}{4}} \end{array}$$

25. $2\frac{3}{4} \div 4\frac{1}{2} = \frac{11}{4} \div \frac{9}{2}$

$$= \frac{11}{\cancel{4}_{2}} \times \frac{\cancel{2}^{1}}{9} = \mathbf{\frac{11}{18}}$$

26. $\frac{2}{3} \div \frac{1}{2} = \frac{2}{3} \times \frac{2}{1} = \frac{4}{3} = 1\frac{1}{3}$

$$\begin{array}{r} 5 \\ -\ 1\frac{1}{3} \\ \hline \end{array} \longrightarrow \begin{array}{r} 4\frac{3}{3} \\ -\ 1\frac{1}{3} \\ \hline \mathbf{3\frac{2}{3}} \end{array}$$

27.
$$\begin{array}{r} \mathbf{0.175} \\ 8\overline{)1.400} \\ \underline{8} \\ 60 \\ \underline{56} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

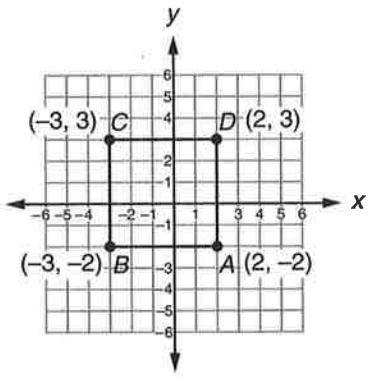
28. $2 \times 3 \times 4 = 24$

0.24 $\longrightarrow$ **0.024**

29. (a)
$$\begin{array}{r} 12.25 \\ \times\ \ 10 \\ \hline 122.50 = \mathbf{122.5} \end{array}$$

(b)
$$\begin{array}{r} \mathbf{1.225} \\ 10\overline{)12.250} \\ \underline{10} \\ 22 \\ \underline{20} \\ 25 \\ \underline{20} \\ 50 \\ \underline{50} \\ 0 \end{array}$$

30. Answers may vary. See student work.
Sample answer:



Coordinates: $A\ (2, -2)$, $B\ (-3, -2)$, $C\ (-3, 3)$, $D\ (2, 3)$

LESSON 37, LESSON PRACTICE

a. Area $= \frac{5\text{ cm} \cdot 12\text{ cm}}{2} = \frac{60\text{ cm}^2}{2}$

$= \mathbf{30\ cm^2}$

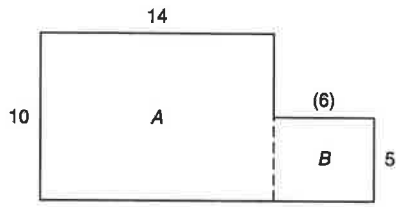
b. Area $= \frac{12\text{ cm} \cdot 8\text{ cm}}{2} = \frac{96\text{ cm}^2}{2}$

$= \mathbf{48\ cm^2}$

c. Area $= \frac{6\text{ cm} \cdot 6\text{ cm}}{2} = \frac{36\text{ cm}^2}{2}$

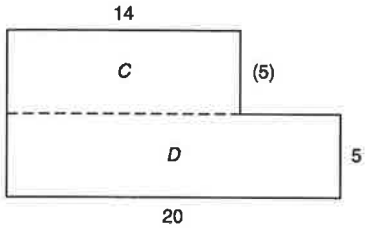
$= \mathbf{18\ cm^2}$

d.



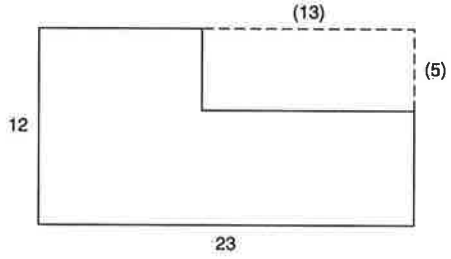
$$\begin{array}{rrrr} \text{Area } A & = & 14 \text{ m} \times 10 \text{ m} & = 140 \text{ m}^2 \\ + \text{ Area } B & = & 6 \text{ m} \times 5 \text{ m} & = 30 \text{ m}^2 \\ \hline & & \text{Total} & = \mathbf{170 \text{ m}^2} \end{array}$$

or



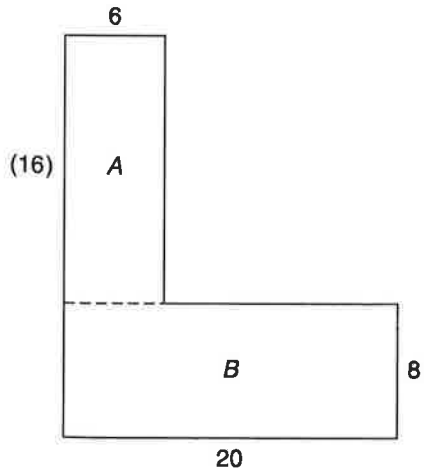
$$\begin{array}{rrrr} \text{Area } C & = & 14 \text{ m} \times 5 \text{ m} & = 70 \text{ m}^2 \\ + \text{ Area } D & = & 20 \text{ m} \times 5 \text{ m} & = 100 \text{ m}^2 \\ \hline & & \text{Total} & = \mathbf{170 \text{ m}^2} \end{array}$$

e.



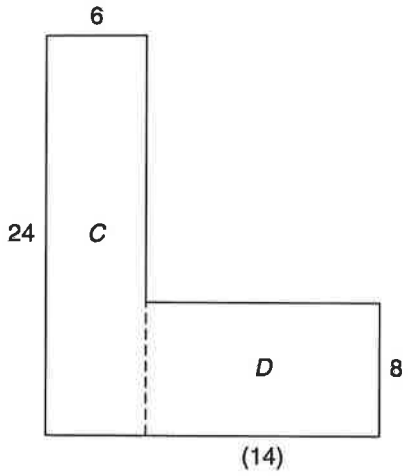
$$\begin{array}{rrrr} \text{Area of large} & = & 12 \text{ cm} \times 23 \text{ cm} & = 276 \text{ cm}^2 \\ - \text{ Area of small} & = & 13 \text{ cm} \times 5 \text{ cm} & = 65 \text{ cm}^2 \\ \hline & & \text{Total} & = \mathbf{211 \text{ cm}^2} \end{array}$$

f.



$$\begin{array}{rrrr} \text{Area } A & = & 16 \text{ in.} \times 6 \text{ in.} & = 96 \text{ in.}^2 \\ + \text{ Area } B & = & 20 \text{ in.} \times 8 \text{ in.} & = 160 \text{ in.}^2 \\ \hline & & \text{Total} & = \mathbf{256 \text{ in.}^2} \end{array}$$

or



$$\begin{array}{rrrr} \text{Area } C & = & 24 \text{ in.} \times 6 \text{ in.} & = 144 \text{ in.}^2 \\ + \text{ Area } D & = & 14 \text{ in.} \times 8 \text{ in.} & = 112 \text{ in.}^2 \\ \hline & & \text{Total} & = \mathbf{256 \text{ in.}^2} \end{array}$$

g. $A = \frac{1}{2}bh$; $A = \frac{bh}{2}$

LESSON 37, MIXED PRACTICE

1.

$$\begin{array}{r} 2 \text{ won} \\ + \text{ ? lost} \\ \hline 3 \text{ total} \end{array} \longrightarrow \begin{array}{r} 2 \text{ won} \\ + \text{ 1 lost} \\ \hline 3 \text{ total} \end{array}$$

$$\frac{\text{won}}{\text{lost}} = \frac{\mathbf{2}}{\mathbf{1}}$$

2.

$$\begin{array}{r} 47 \\ 53 \\ 62 \\ 56 \\ 46 \\ + \ 48 \\ \hline 312 \text{ cars} \end{array} \qquad \begin{array}{r} \mathbf{52 \text{ cars}} \\ 6\overline{)312 \text{ cars}} \\ \underline{30} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

3.

$$\begin{array}{r} {\scriptstyle 2} \\ 11.6 \text{ seconds} \\ 11.3 \text{ seconds} \\ 11.2 \text{ seconds} \\ + \ 10.9 \text{ seconds} \\ \hline 45.0 \text{ seconds} \end{array} = \mathbf{45 \text{ seconds}}$$

4. Subtract $1.30 from $10 to find how much the 3 gallons of milk cost. Then divide that number by 3 to find how much each gallon cost.

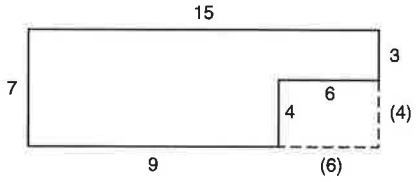
5.

	18 holes
$\frac{2}{3}$ were par holes.	6 holes
	6 holes
$\frac{1}{3}$ were not par holes.	6 holes

(a) 2×6 holes $=$ **12 holes**

(b) **6 holes**

6.



Perimeter $=$ 15 in. $+$ 7 in. $+$ 9 in. $+$ 4 in. $+$ 6 in. $+$ 3 in. $=$ **44 in.**

7.

Area of large rectangle	$= 7$ in. $\times$ 15 in.
	$= 105$ in.^{2}
$-$ Area of small rectangle	$= 6$ in. $\times$ 4 in.
	$= 24$ in.^{2}
Area of figure	$=$ **81 in.^{2}**

8. (a) $\frac{5}{6} \cdot \frac{3}{3} = \mathbf{\frac{15}{18}}$

(b) $\frac{9 \div 3}{24 \div 3} = \mathbf{\frac{3}{8}}$

(c) $\frac{3}{4} \cdot \frac{5}{5} = \mathbf{\frac{15}{20}}$

9. (a) **0.49**

(b) **0.51**

(c) $\frac{51}{100} =$ **51%**

10. (a) $3184.56\textcircled{4}1 \longrightarrow$ **3184.56**

(b) $31\textcircled{8}4.5641 \longrightarrow$

$3200.\cancel{0000} \longrightarrow$ **3200**

11. (a) **Twenty-five hundred-thousandths**

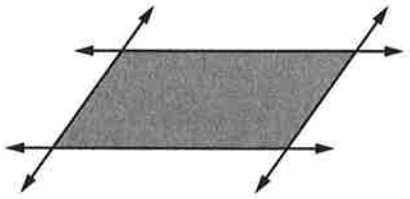
(b) **60.07**

12. (a) $2\% = \frac{2}{100} = \mathbf{\frac{1}{50}}$

(b) $\frac{720}{1080} = \frac{\overset{1}{\cancel{2}} \cdot \overset{1}{\cancel{2}} \cdot \overset{1}{\cancel{2}} \cdot 2 \cdot \overset{1}{\cancel{3}} \cdot \overset{1}{\cancel{3}} \cdot \overset{1}{\cancel{5}}}{\underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{2}} \cdot \underset{1}{\cancel{3}} \cdot \underset{1}{\cancel{3}} \cdot 3 \cdot \underset{1}{\cancel{5}}} = \mathbf{\frac{2}{3}}$

13. $\mathbf{1\frac{1}{8}}$ **in.**

14. **One possibility:**



15. (a) Perimeter $=$ 15 cm $+$ 15 cm $+$ 18 cm $=$ **48 cm**

(b) Area $= \frac{18 \text{ cm} \cdot 12 \text{ cm}}{2} =$ **108 cm^2**

16.

0.2	0.2
$+$ 0.3	$\times$ 0.3
0.5	0.06

0.5 > 0.06

17.

1 heads	$\frac{\text{heads}}{\text{total}} = \mathbf{\frac{1}{2}}$
$+$ 1 tails	
2 total	

18. $\frac{7 \cdot \overset{2}{\cancel{8}}}{\underset{1}{\cancel{4}}} = 14$ $\quad x =$ **14**

19.

$\overset{3}{\cancel{4}}.\overset{1}{}2$

$-\ 1.7$

2.5

20.

0.45

$+$ 3.6

4.05

21.

$$3\overline{)4.5}\quad \mathbf{1.5}$$

$\underline{3}$

15

$\underline{15}$

0

22. $\frac{3}{5} \cdot 12 \cdot 4\frac{1}{6} = \frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{5}}} \cdot \frac{\overset{2}{\cancel{12}}}{1} \cdot \frac{\overset{5}{\cancel{25}}}{\underset{1}{\cancel{6}}}$

$= \mathbf{30}$

23.
$$\begin{aligned} \frac{5}{6} &= \frac{10}{12} \\ 1\frac{3}{4} &= 1\frac{9}{12} \\ +\ 2\frac{1}{2} &= 2\frac{6}{12} \\ \hline 3\frac{25}{12} &= \mathbf{5\frac{1}{12}} \end{aligned}$$

24.
$$\begin{aligned} \frac{5}{8} &= \frac{5}{8} \\ \frac{1}{2} &= \frac{4}{8} \\ +\ \frac{3}{8} &= \frac{3}{8} \\ \hline \frac{12}{8} &= \mathbf{1\frac{1}{2}} \end{aligned}$$

25.
$$\begin{aligned} 3\frac{9}{20} &= 3\frac{27}{60} \\ -\ 1\frac{5}{12} &= 1\frac{25}{60} \\ \hline 2\frac{2}{60} &= \mathbf{2\frac{1}{30}} \end{aligned}$$

26. $\frac{a}{b} = a \div b = 3\frac{1}{3} \div 5$

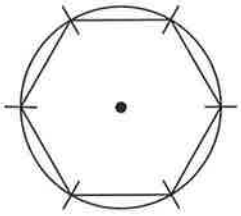
$$= \frac{10}{3} \div \frac{5}{1} = \frac{\overset{2}{\cancel{10}}}{3} \times \frac{1}{\underset{1}{\cancel{5}}} = \mathbf{\frac{2}{3}}$$

27. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$

28. (a)
$$\begin{array}{r} 0.25 \\ \times\ \ 10 \\ \hline 2.50 \end{array} = \mathbf{2.5}$$

(b)
$$\begin{array}{r} \mathbf{0.025} \\ 10\overline{)0.250} \\ 20 \\ \hline 50 \\ 50 \\ \hline 0 \end{array}$$

29.



30. **Fourth quadrant**

Lesson 38, Lesson Practice

a.
$$\begin{aligned} \text{January: } 4 \times 10{,}000 \text{ doughnuts} &= 40{,}000 \text{ doughnuts} \\ \text{February: } 6 \times 10{,}000 \text{ doughnuts} &= 60{,}000 \text{ doughnuts} \end{aligned}$$
$$\begin{array}{r} 60{,}000 \text{ doughnuts} \\ -\ 40{,}000 \text{ doughnuts} \\ \hline \mathbf{20{,}000 \text{ doughnuts}} \end{array}$$

b.
$$\begin{array}{r} 5000 \text{ cans} \\ 8000 \text{ cans} \\ 9000 \text{ cans} \\ +\ 4000 \text{ cans} \\ \hline \mathbf{26{,}000 \text{ cans}} \end{array}$$

c. **Test 4**

d. $\frac{4}{24} = \mathbf{\frac{1}{6}}$

Lesson 38, Mixed Practice

1.
$$\begin{array}{r} 7 \text{ civilians} \\ +\ 3 \text{ soldiers} \\ \hline 10 \text{ total} \end{array}$$
$$\frac{\text{soldiers}}{\text{total}} = \mathbf{\frac{3}{10}}$$

2.
$$\begin{array}{r} \mathbf{115 \text{ pages}} \\ 3\overline{)345 \text{ pages}} \\ \underline{3} \\ 04 \\ \underline{3} \\ 15 \\ \underline{15} \\ 0 \end{array}$$

3. 5 minutes = 5(60 seconds) = 300 seconds
$$\begin{array}{r} 300 \text{ seconds} \\ +\ 52 \text{ seconds} \\ \hline \mathbf{352 \text{ seconds}} \end{array}$$

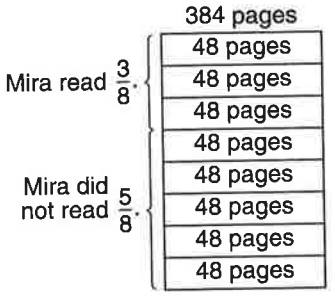
4.
$$\begin{array}{r} 9000 \text{ cans} \\ -\ 4000 \text{ cans} \\ \hline \mathbf{5000 \text{ cans}} \end{array}$$

5.

$$\begin{array}{r} 60 \\ 70 \\ 75 \\ 70 \\ 80 \\ 85 \\ +\ 85 \\ \hline 525 \end{array} \qquad 7\overline{)525} \quad \mathbf{75}$$

6. Answers will vary. See student work.

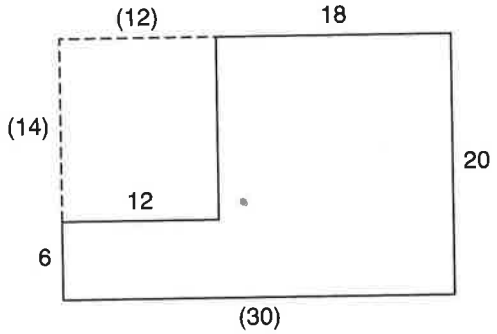
7.



(a) 3×48 pages $=$ **144 pages**

(b) $\frac{3}{8} + \frac{1}{8} = \frac{4}{8} = \frac{1}{2}$ **48 pages**

8.



(a) Area of large rectangle $= 30$ in. $\times$ 20 in.
$= 600$ in.^{2}
Area of small rectangle $= 12$ in. $\times$ 14 in.
$= 168$ in.^{2}
Area of figure $= 600$ in.$^2 - 168$ in.^{2}
$=$ **432 in.^{2}**

(b) Perimeter $= 18$ in. $+ 20$ in. $+ 30$ in.
$+ 6$ in. $+ 12$ in. $+ 14$ in.
$=$ **100 in.**

9. (a) $\frac{7}{9} \cdot \frac{2}{2} = \frac{\mathbf{14}}{18}$

(b) $\frac{20}{36} \div \frac{4}{4} = \frac{\mathbf{5}}{9}$

(c) $\frac{4}{5} \cdot \frac{6}{6} = \frac{24}{\mathbf{30}}$

10. (a) $2\textcircled{9}86.34157 \longrightarrow$
$3000.\cancel{00000} \longrightarrow$ **3000**

(b) $2986.341\underline{\textcircled{5}}7 \longrightarrow$ **2986.342**

11. Probability of stopping on

$1 = \frac{3}{8}$

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

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

$4 = \frac{1}{8}$

(a) **1**

(b) **4**

12. (a) **1.2 cm**

(b) **12 mm**

13. Perimeter $= 1.2$ cm $+ 1$ cm $+ 1.2$ cm
$+ 1$ cm $=$ **4.4 cm**

14. The number 3.4 is about halfway between 3 and 4. Point *B* is too close to 3 to represent 3.4. So the best choice is *C*.

15. (a) $\overline{AC}$ (or $\overline{CA}$)

(b) $\overline{BC}$ (or $\overline{CB}$)

16. (a) Area $= \frac{6 \text{ cm} \cdot 6 \text{ cm}}{2} =$ **18 cm^2**

(b) Area $= \frac{6 \text{ cm} \cdot 6 \text{ cm}}{2} =$ **18 cm^2**

(c) Area $= 18$ cm$^2 + 18$ cm$^2 =$ **36 cm^2**

17.

$$\begin{array}{r} 6.7 \\ -\ 4.3 \\ \hline 2.4 \end{array}$$

$a =$ **2.4**

18.

$$\begin{array}{r} {\scriptstyle 1} \\ 4.7 \\ +\ 3.6 \\ \hline 8.3 \end{array}$$

$m =$ **8.3**

19.
$$\begin{array}{r} 0.45 \\ 10\overline{)4.50} \\ \underline{40} \\ 50 \\ \underline{50} \\ 0 \end{array}$$
$w = \mathbf{0.45}$

20.
$$\begin{array}{r} 2.5 \\ \times\ 2.5 \\ \hline 125 \\ \underline{50} \\ 6.25 \end{array}$$
$x = \mathbf{6.25}$

21.
$$\begin{array}{r} {\scriptstyle 1} \\ {\scriptstyle 1}5.37 \\ 27.7 \\ +\ \ 4. \\ \hline \mathbf{37.07} \end{array}$$

22.
$$\begin{array}{r} \mathbf{0.25} \\ 5\overline{)1.25} \\ \underline{10} \\ 25 \\ \underline{25} \\ 0 \end{array}$$

23. $\frac{5}{9} \cdot 6 \cdot 2\frac{1}{10}$

$$\frac{\cancel{5}^{1}}{\cancel{9}_{1}^{\cancel{3}}} \cdot \frac{\cancel{6}^{\cancel{2}}}{1} \cdot \frac{\cancel{21}^{7}}{\cancel{10}_{1}^{\cancel{2}}} = \mathbf{7}$$

24.
$$\begin{array}{rcl} \frac{5}{8} & = & \frac{5}{8} \\ \frac{3}{4} & = & \frac{6}{8} \\ +\ \frac{1}{2} & = & \frac{4}{8} \\ \hline \frac{15}{8} & = & \mathbf{1\frac{7}{8}} \end{array}$$

25. $5 \div 3\frac{1}{3} = \frac{5}{1} \div \frac{10}{3} = \frac{\cancel{5}^{1}}{1} \times \frac{3}{\cancel{10}_{2}}$

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

26.
$$\begin{array}{rcl} \frac{1}{2} & = & \frac{5}{10} \\ -\ \frac{1}{5} & = & \frac{2}{10} \\ \hline & & \frac{3}{10} \end{array}$$
$\frac{3}{10} - \frac{3}{10} = \mathbf{0}$

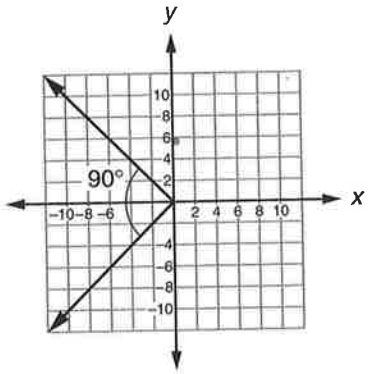
27. **A.** $\mathbf{4 \cdot 4^2}$

28. (a) **125 mL**

(b)
$$\begin{array}{r} 1000 \text{ mL} \\ -\ 125 \text{ mL} \\ \hline \mathbf{875 \text{ mL}} \end{array}$$

29. **Switch 916.42 and 916.37**

30.



LESSON 39, LESSON PRACTICE

a.
$$\begin{array}{rcl} \frac{a}{12} & = & \frac{6}{8} \\ 8 \cdot a & = & 12 \cdot 6 \\ 8a & = & 72 \\ a & = & \frac{72}{8} \\ a & = & \mathbf{9} \\ \frac{9}{12} & = & \frac{6}{8} \end{array}$$

b.
$$\begin{array}{rcl} \frac{30}{b} & = & \frac{20}{16} \\ 20 \cdot b & = & 30 \cdot 16 \\ 20b & = & 480 \\ b & = & \frac{480}{20} \\ b & = & \mathbf{24} \\ \frac{30}{24} & = & \frac{20}{16} \end{array}$$

c.
$$\frac{14}{21} = \frac{c}{15}$$
$$21 \cdot c = 15 \cdot 14$$
$$21c = 210$$
$$c = \frac{210}{21}$$
$$c = \mathbf{10}$$
$$\frac{14}{21} = \frac{10}{15}$$

d.
$$\frac{30}{25} = \frac{24}{d}$$
$$30 \cdot d = 24 \cdot 25$$
$$30d = 600$$
$$d = \mathbf{20}$$
$$\frac{30}{25} = \frac{24}{20}$$

e.
$$\frac{30}{100} = \frac{n}{40}$$
$$100 \cdot n = 40 \cdot 30$$
$$100n = 1200$$
$$n = \frac{1200}{100}$$
$$n = \mathbf{12}$$
$$\frac{30}{100} = \frac{12}{40}$$

f.
$$\frac{m}{100} = \frac{9}{12}$$
$$12 \cdot m = 100 \cdot 9$$
$$12m = 900$$
$$m = \frac{900}{12}$$
$$m = \mathbf{75}$$
$$\frac{75}{100} = \frac{9}{12}$$

Lesson 39, Mixed Practice

1.
$$\begin{array}{r} 64 \text{ inches} \\ -\ 61 \text{ inches} \\ \hline \mathbf{3 \text{ inches}} \end{array}$$

2. **Between his thirteenth and fourteenth birthdays**

3.
$$\frac{\text{princes}}{\text{princesses}} = \frac{12}{16} = \frac{\mathbf{3}}{\mathbf{4}}$$

4.
$$\begin{array}{r} 497 \\ 513 \\ 436 \\ +\ 410 \\ \hline 1856 \text{ miles} \end{array}$$

$$\begin{array}{r} \mathbf{464 \text{ miles}} \\ 4\overline{)1856} \\ 16 \\ \hline 25 \\ 24 \\ \hline 16 \\ 16 \\ \hline 0 \end{array}$$

5.
$$\begin{array}{r} \$4.50 \\ \times\ \ 52 \\ \hline 900 \\ 2250 \\ \hline \mathbf{\$234.00} \end{array}$$

6.

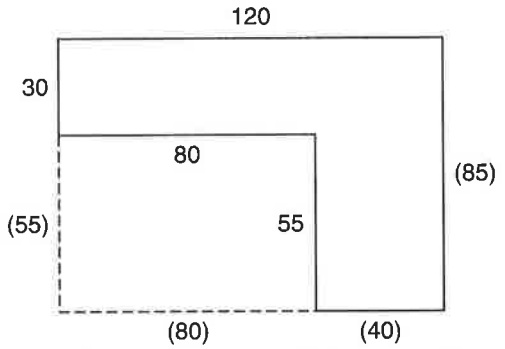
105 adults

$\frac{3}{7}$ were less than 5 feet tall.	15 adults
	15 adults
	15 adults
$\frac{4}{7}$ were 5 feet tall or taller.	15 adults
	15 adults
	15 adults
	15 adults

(a) 3×15 adults $=$ **45 adults**

(b) 4×15 adults $=$ **60 adults**

7.



Area of large rectangle $= 85 \text{ mm} \times 120 \text{ mm}$
$= 10{,}200 \text{ mm}^2$

Area of small rectangle $= 55 \text{ mm} \times 80 \text{ mm}$
$= 4400 \text{ mm}^2$

Area of figure $= 10{,}200 \text{ mm}^2 - 4400 \text{ mm}^2$
$= \mathbf{5800 \text{ mm}^2}$

8. Perimeter $= 120 \text{ mm} + 85 \text{ mm} + 40 \text{ mm} + 55 \text{ mm} + 80 \text{ mm} + 30 \text{ mm}$
$= \mathbf{410 \text{ mm}}$

9. (a) **2.5**

(b) $2\frac{5}{10} = \mathbf{2\frac{1}{2}}$

10. (a) $0.91\underline{6}6666 \longrightarrow$ **0.92**

(b) $0.91666\underline{6}6 \longrightarrow$ **0.91667**

11. $9.16 \longrightarrow 9$

$\$1.39\frac{9}{10} \longrightarrow \$1.40$

$$\begin{array}{r} \$1.40 \\ \times \quad 9 \\ \hline \$12.60 \end{array}$$

12. (a) **100.075**

(b) **0.175**

13. (a) $\angle RPS$ (or $\angle SPR$)

(b) $\angle QPR$ (or $\angle RPQ$)

(c) $\angle QPS$ (or $\angle SPQ$)

14. **Each term can be found by dividing the previous term by 10.**

$0.1 \div 10 = 0.01$

$0.01 \div 10 = 0.001$

$0.001 \div 10 = 0.0001$

0.01, 0.001, 0.0001

15. $\frac{8}{12} = \frac{6}{x}$

$8 \cdot x = 6 \cdot 12$

$8x = 72$

$x = \frac{72}{8}$

$x = \mathbf{9}$

16. $\frac{16}{y} = \frac{2}{3}$

$2 \cdot y = 16 \cdot 3$

$2y = 48$

$y = \frac{48}{2}$

$y = \mathbf{24}$

17. $\frac{21}{14} = \frac{n}{4}$

$14 \cdot n = 4 \cdot 21$

$14n = 84$

$n = \frac{84}{14}$

$n = \mathbf{6}$

18.
$$\begin{array}{r} 0.\overset{6}{7}\overset{1}{1}5 \\ -\ 0.\ 3\ 6 \\ \hline 0.\ 3\ 9 \end{array}$$

$m = \mathbf{0.39}$

19.
$$\begin{array}{r} \overset{0}{\not{1}}.\overset{1}{1}4 \\ -\ 0.\ 8 \\ \hline 0.\ 6 \end{array}$$

$w = \mathbf{0.6}$

20.
$$\begin{array}{r} 0.9 \\ 8\overline{)7.2} \\ \underline{7\ 2} \\ 0 \end{array}$$

$x = \mathbf{0.9}$

21.
$$\begin{array}{r} 1.2 \\ \times\ 0.4 \\ \hline 0.48 \end{array}$$

$y = \mathbf{0.48}$

22. $9.6 + 12 + 8.59$

$\downarrow \quad \downarrow \quad \downarrow$

$10 + 12 + 9 = \mathbf{31}$

$$\begin{array}{r} \overset{1}{2}9.6 \\ 12. \\ +\ 8.59 \\ \hline \mathbf{30.19} \end{array}$$

23. $3.15 - (2.1 - 0.06)$

$\downarrow \quad \downarrow \quad \downarrow$

$3 - (2 - 0) = \mathbf{1}$

$$\begin{array}{rr} 2.\overset{0}{\not{1}}\overset{1}{1}0 & 3.15 \\ -\ 0.\ 0\ 6 & -\ 2.04 \\ \hline 2.\ 0\ 4 & \mathbf{1.11} \end{array}$$

24.
$$\begin{array}{r} 4\frac{5}{12} = 4\frac{10}{24} \\ +\ 6\frac{5}{8} = 6\frac{15}{24} \\ \hline 10\frac{25}{24} = \mathbf{11\frac{1}{24}} \end{array}$$

25.
$$\begin{array}{rr} 4\frac{1}{4} = 4\frac{5}{20} \longrightarrow & 3\frac{25}{20} \\ -\ 1\frac{3}{5} = 1\frac{12}{20} & -\ 1\frac{12}{20} \\ \hline & \mathbf{2\frac{13}{20}} \end{array}$$