LESSON 31, LESSON PRACTICE

a. $\frac{3}{100}$; 0.03

b. $\frac{3}{10}$; 0.3

c. 3

d. 4

e. **Twenty-five and one hundred thirty-four thousandths**

f. **One hundred and one hundredth**

g. **102.3**

h. **0.0125**

i. **300.075**

LESSON 31, MIXED PRACTICE

1.
$$\begin{array}{r} \$26.47 \\ +\ \$32.54 \\ \hline \$59.01 \end{array} \qquad \begin{array}{r} \$89.89 \\ -\ \$59.01 \\ \hline \mathbf{\$30.88} \end{array}$$

2.
$$\begin{array}{r} 326 \text{ pages} \\ 288 \text{ pages} \\ 349 \text{ pages} \\ +\ 401 \text{ pages} \\ \hline 1364 \text{ pages} \end{array}$$

$$4\overline{)1364}$$ **341 pages**

3.
$$12\overline{)\$15.96}$$ **\$1.33**

$$\begin{array}{r} 12 \\ \hline 39 \\ 36 \\ \hline 36 \\ 36 \\ \hline 0 \end{array}$$

4.
$$\begin{array}{r} 1607 \\ -\ 1492 \\ \hline \mathbf{115 \text{ years}} \end{array}$$

5. **Divide the perimeter of the square by 4 to find the length of a side. Then multiply the length of a side by 6 to find the perimeter of the hexagon.**

6. $80\% = \frac{80}{100} = \frac{4}{5}$

20 questions

$\frac{4}{5}$ were correct.	4 questions
	4 questions
	4 questions
	4 questions
$\frac{1}{5}$ were incorrect.	4 questions

(a) 4 × 4 questions = **16 questions**

(b) **4 questions**

7. (a) **500,000**

(b) **481,000**

8. 50,000 − 20,000 = **30,000**

9. (a) $\frac{7}{100}$

(b) **0.07**

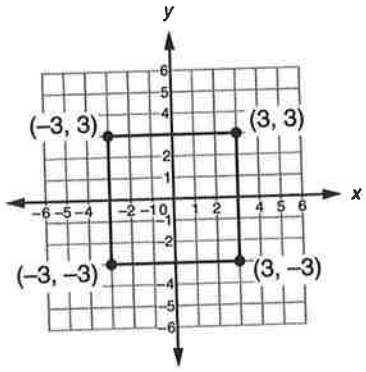
(c) $\frac{7}{100} = 7\%$

10. **7**

11. (a) $\frac{3}{10} = 0.3$

(b) $\frac{3}{100} < 0.3$

12.



(a) Perimeter = 4(6 units) = **24 units**

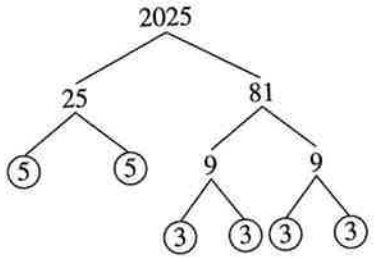
(b) Area = (6 units)(6 units)
= **36 units²**

13. (a) $\frac{15 \div 3}{24 \div 3} = \frac{5}{\mathbf{8}}$

(b) $\frac{7}{12} \cdot \frac{2}{2} = \frac{\mathbf{14}}{24}$

(c) $\frac{4 \div 4}{24 \div 4} = \frac{\mathbf{1}}{6}$

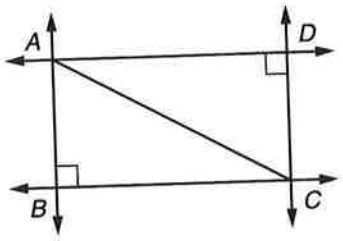
14. (a)



$2025 = \mathbf{3^4 \cdot 5^2}$

(b) $\sqrt{2025} = \sqrt{3^4 \cdot 5^2}$
$= 3^2 \cdot 5 = \mathbf{45}$

15. One possibility:



(a) **Rectangle**

(b) $\angle BCA$ (or $\angle ACB$)

16. $\frac{\overset{2}{\cancel{6}} \cdot \overset{4}{\cancel{12}}}{\cancel{9}_{\cancel{3}_{1}}} = 8 \qquad n = \mathbf{8}$

17.
$$\begin{array}{r} 90^\circ \\ +\ 45^\circ \\ \hline 135^\circ \end{array} \qquad \begin{array}{r} 180^\circ \\ -\ 135^\circ \\ \hline 45^\circ \end{array}$$

$b = \mathbf{45^\circ}$

18.
$$\begin{array}{r} \$220.15 \\ -\ \$98.75 \\ \hline \$121.40 \end{array}$$

$w = \mathbf{\$121.40}$

19.
$$\begin{array}{r} \$4.65 \\ \times\ \ 48 \\ \hline 37\,20 \\ 186\,0 \\ \hline \$223.20 \end{array}$$

$m = \mathbf{\$223.20}$

20.
$$\begin{array}{r} \frac{1}{2} \cdot \frac{3}{3} = \frac{3}{6} \\ +\ \frac{2}{3} \cdot \frac{2}{2} = \frac{4}{6} \\ \hline \frac{7}{6} = \mathbf{1\frac{1}{6}} \end{array}$$

21. $\frac{\overset{1}{\cancel{3}}}{\cancel{4}_{2}} \cdot \frac{\overset{1}{\cancel{2}}}{\cancel{3}_{1}} = \frac{1}{2}$

$\frac{1}{2} - \frac{1}{2} = \mathbf{0}$

22.
$$\begin{array}{r} 3\frac{5}{6} = 3\frac{5}{6} \\ -\ \frac{1}{3} \cdot \frac{2}{2} = \frac{2}{6} \\ \hline 3\frac{3}{6} = \mathbf{3\frac{1}{2}} \end{array}$$

23. $\frac{5}{8} \cdot 2\frac{2}{5} \cdot \frac{4}{9}$

$= \frac{\overset{1}{\cancel{5}}}{\cancel{8}_{2}} \cdot \frac{\overset{1}{\cancel{12}}}{\cancel{5}_{1}} \cdot \frac{4}{\cancel{9}_{3}} = \frac{4}{6} = \mathbf{\frac{2}{3}}$

24. $2\frac{2}{3} \div 1\frac{3}{4}$

$= \frac{8}{3} \div \frac{7}{4} = \frac{8}{3} \times \frac{4}{7}$

$= \frac{32}{21} = \mathbf{1\frac{11}{21}}$

25. $1\frac{7}{8} \div 3 = \frac{15}{8} \div \frac{3}{1}$

$= \frac{\overset{5}{\cancel{15}}}{8} \times \frac{1}{\cancel{3}_{1}} = \mathbf{\frac{5}{8}}$

26.
$$\begin{array}{r} 3\frac{1}{2} = 3\frac{3}{6} \\ +\ 1\frac{5}{6} = 1\frac{5}{6} \\ \hline 4\frac{8}{6} = 5\frac{2}{6} = \mathbf{5\frac{1}{3}} \end{array}$$

27.
$$\begin{array}{r} 5\frac{1}{4} = 5\frac{2}{8} \\ -\ 1\frac{5}{8} = 1\frac{5}{8} \\ \hline \end{array} \longrightarrow \begin{array}{r} 4\frac{10}{8} \\ -\ 1\frac{5}{8} \\ \hline \mathbf{3\frac{5}{8}} \end{array}$$

28.
$$\begin{array}{rcl} \frac{4}{3} & = & \frac{16}{12} \\ + \frac{3}{4} & = & \frac{9}{12} \\ \hline \frac{25}{12} & = & 2\frac{1}{12} \end{array}$$

29. $k = 10^6 = 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$
$= 1{,}000{,}000$
One million

30. (a) **180°**

(b) **90°**

(c) **45°**

Lesson 32, Lesson Practice

a. 2 meters = 2(100 centimeters)
= **200 centimeters**

b. **A 1-gallon jug can hold a little less than four liters. (Have students check the label on a gallon bottle; 3.78 liters.)**

c. **1000 × 2.2 pounds is about 2200 pounds.**

d. A 100°C difference is equivalent to a difference of 180°F. Divide both by 10°. A 10°C difference is equivalent to a difference of 18°F.
18°F

e. 3 kilometers = 3000 meters
3000 meters
− 800 meters
2200 meters

f. 30 cm = 300 mm
300 mm
− 120 mm
180 mm

Lesson 32, Mixed Practice

1.
$$\begin{array}{r} 4248 \\ 3584 \\ +\ 9418 \\ \hline 17{,}250 \end{array} \qquad 3\overline{)17250} \quad \mathbf{5750}$$
15
22
21
15
15
00
00
0

2. $60\overline{)206}$ 3 R 26
3 hours 26 minutes

3. $\frac{440}{1760}$ mile = $\frac{22}{88}$ mile = $\frac{1}{4}$ **mile**

4. 20 cm ÷ 4 = 5 cm
Perimeter = (5)(5 cm) = **25 cm**

5. (a) 3,000,000

(b) 3,200,000

6.
$$\begin{array}{r} 300 \\ \times\ \ 500 \\ \hline \mathbf{150{,}000} \end{array}$$

7.

200 songs

$\frac{5}{8}$ were about love and chivalry.	25 songs
	25 songs
	25 songs
	25 songs
	25 songs
$\frac{3}{8}$ were not about love and chivalry.	25 songs
	25 songs
	25 songs

(a) 5(25 songs) = **125 songs**

(b) 3(25 songs) = **75 songs**

8. (a) $\frac{9}{10}$

(b) **0.9**

(c) $\frac{9}{10} = \frac{90}{100}$ = **90%**

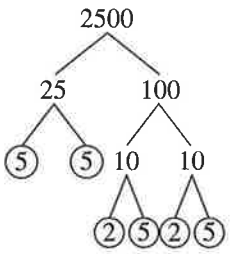
9. **Three and twenty-five thousandths**

10. **76.05**

11. **\$30.00 ÷ 5 = \$6.00**

12. (a) **(2 × 1000) + (5 × 100)**

(b)

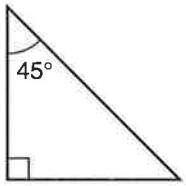


$2500 = \mathbf{2^2 \cdot 5^4}$

(c) $\sqrt{2500} = \sqrt{2^2 \cdot 5^4}$
$= 2 \cdot 5^2 = \mathbf{50}$

13. **\$0.60 per liter**
35)\$21.00

14.



15. (a) Area = (6 cm)(6 cm) = **36 cm²**

(b) Area = (8 cm)(8 cm) = **64 cm²**

(c) Area = 36 cm² + 64 cm² = **100 cm²**

16. Perimeter = 6 cm + 6 cm + 6 cm
+ 2 cm + 8 cm + 8 cm + 8 cm
= **44 cm**

17. $\frac{\overset{5}{\cancel{10}} \cdot \overset{3}{\cancel{6}}}{\underset{1}{\cancel{4}}\ \underset{1}{\cancel{2}}} = 15 \qquad w = \mathbf{15}$

18.
$$\begin{array}{r} 180° \\ -\ 65° \\ \hline 115° \end{array}$$
$s = \mathbf{115°}$

19.
$$\begin{array}{rl} \frac{1}{4} &= \frac{2}{8} \\ \frac{3}{8} &= \frac{3}{8} \\ +\ \frac{1}{2} &= \frac{4}{8} \\ \hline \frac{9}{8} &= \mathbf{1\frac{1}{8}} \end{array}$$

20.
$$\begin{array}{rl} \frac{5}{6} &= \frac{10}{12} \\ -\ \frac{3}{4} &= \frac{9}{12} \\ \hline \frac{1}{12} & \end{array}$$

21.
$$\begin{array}{rl} \frac{5}{16} &= \frac{25}{80} \\ -\ \frac{3}{20} &= \frac{12}{80} \\ \hline \frac{13}{80} & \end{array}$$

22. $\frac{8}{9} \cdot 1\frac{1}{5} \cdot 10 = \frac{\overset{2}{\cancel{8}}}{\underset{3}{\cancel{9}}} \cdot \frac{\overset{2}{\cancel{6}}}{\underset{1}{\cancel{5}}} \cdot \frac{\overset{2}{\cancel{10}}}{1}$
$= \frac{32}{3} = \mathbf{10\frac{2}{3}}$

23.
$$\begin{array}{rl} 6\frac{1}{6} &= 6\frac{1}{6} \longrightarrow \quad 5\frac{7}{6} \\ -\ 2\frac{1}{2} &= 2\frac{3}{6} \qquad -\ 2\frac{3}{6} \\ \hline & \qquad\quad 3\frac{4}{6} \end{array}$$

$3\frac{4}{6} = \mathbf{3\frac{2}{3}}$

24.
$$\begin{array}{rl} 4\frac{5}{8} &= 4\frac{5}{8} \\ +\ 1\frac{1}{2} &= 1\frac{4}{8} \\ \hline & 5\frac{9}{8} = \mathbf{6\frac{1}{8}} \end{array}$$

25. $\frac{2}{3} \div \frac{1}{2} = \frac{2}{3} \cdot \frac{2}{1} = \frac{4}{3}$
$\frac{2}{3} + \frac{4}{3} = \frac{6}{3} = \mathbf{2}$

26. $\frac{\overset{1}{\cancel{5}}\ \overset{1}{\cancel{25}}}{\underset{1}{\cancel{36}}\ \underset{1}{\cancel{4}}} \cdot \frac{\overset{1}{\cancel{9}}}{\underset{1}{\cancel{10}}\ \underset{1}{\cancel{2}}} \cdot \frac{\overset{1}{\cancel{2}}\ \overset{1}{\cancel{8}}}{\underset{3}{\cancel{15}}} = \mathbf{\frac{1}{3}}$

27. $5\frac{2}{5} \div \frac{9}{10}$

$\downarrow \quad \downarrow$

$5 \div 1 = \mathbf{5}$

$$5\frac{2}{5} \div \frac{9}{10} = \frac{\overset{3}{\cancel{27}}}{\underset{1}{\cancel{5}}} \times \frac{\overset{2}{\cancel{10}}}{\underset{1}{\cancel{9}}} = \mathbf{6}$$

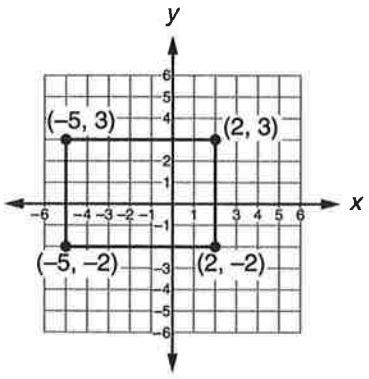
28. $7\frac{3}{4} + 1\frac{7}{8}$

$\downarrow \quad \downarrow$

$8 + 2 = \mathbf{10}$

$$7\frac{3}{4} = 7\frac{6}{8}$$
$$+\ 1\frac{7}{8} = 1\frac{7}{8}$$
$$8\frac{13}{8} = \mathbf{9\frac{5}{8}}$$

29.



(a) **(2, 3)**

(b) Area = (5 units)(7 units) = **35 units²**

30. (a) $\overline{BC}$ (or $\overline{CB}$)

(b) $\angle AOC$ (or $\angle COA$) or $\angle BOC$ (or $\angle COB$)

(c) $\angle ABC$ (or $\angle CBA$) or $\angle BCO$ (or $\angle OCB$)

Lesson 33, Lesson Practice

a. $10.30 = 10.3$

b. $5.06 < 5.60$

c. $1.1 > 1.099$

d. $3.1415\textcircled{9} \rightarrow$ **3.1416**

e. $3\textcircled{6}5.2418 \longrightarrow 400.0000 \longrightarrow$ **400**

f. $57.\textcircled{4}32 \longrightarrow 57.000 \longrightarrow$ **57**

g. $10.2000 \longrightarrow$ **10.2**

h. $8.\textcircled{6}5 \longrightarrow 9$

$21.\textcircled{7} \longrightarrow 22$

$11.\textcircled{0}38 \longrightarrow 11$

$$\begin{array}{r} 9 \\ 22 \\ +\ 11 \\ \hline \mathbf{42} \end{array}$$

Lesson 33, Mixed Practice

1. **Multiply 12 inches by 5 to find the number of inches in 5 feet. Then add 8 inches to find the total number of inches in 5 feet 8 inches.**

2.

$$\begin{array}{r} 42°\text{F} \\ 43°\text{F} \\ 38°\text{F} \\ 47°\text{F} \\ 51°\text{F} \\ 52°\text{F} \\ +\ 49°\text{F} \\ \hline 322°\text{F} \end{array} \qquad \begin{array}{r} \mathbf{46°F} \\ 7\overline{)322°\text{F}} \end{array}$$

3.

$$\begin{array}{r} 120{,}310 \text{ people} \\ -\ 87{,}196 \text{ people} \\ \hline \mathbf{33{,}114 \text{ people}} \end{array}$$

4. $75 - 15 = 60$; $60 - 15 = 45$

60, 45

5. $24 \text{ cm} \div 6 = 4 \text{ cm}$

Perimeter = (4 cm) 8 = **32 cm**

6.

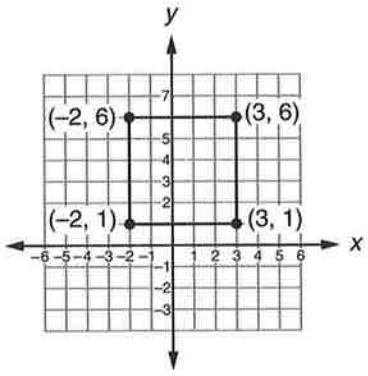
	60 questions
$\frac{2}{3}$ were not T–F.	20 questions
	20 questions
$\frac{1}{3}$ were T–F.	20 questions

(a) **20 questions**

(b) 2×20 questions
$= \mathbf{40\ questions}$

(c) $\frac{100\%}{3} = \mathbf{33\frac{1}{3}\%}$

7.



Area $=$ (5 units)(5 units) $=$ **25 units^2**

8. (a) $15.73\underline{5}91 \longrightarrow$ **15.74**

(b) $15.\underline{7}3591 \longrightarrow 16$
$3.\underline{1}4 \longrightarrow 3$
$16 \times 3 = \mathbf{48}$

9. (a) **One hundred fifty and thirty-five thousandths**

(b) **Fifteen ten-thousandths**

10. (a) **0.125**

(b) **100.025**

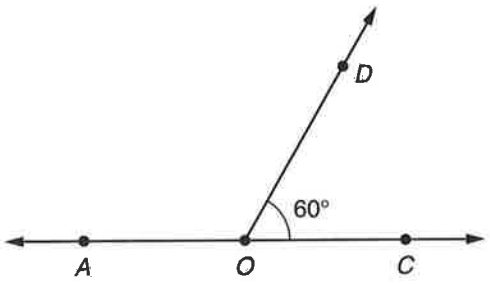
11. (a) $0.128 < 0.14$

(b) $0.03 > 0.0015$

12. (a) **4 cm**

(b) **40 mm**

13.



14. $n \cdot 0 = \mathbf{0}$

15. $63 = 3 \cdot 3 \cdot 7$
$49 = 7 \cdot 7$
$3 \cdot 3 \cdot 7 \cdot 7 = \mathbf{441}$

16. $\frac{\overset{1}{\cancel{4}} \cdot \overset{9}{\cancel{18}}}{\cancel{8}\ \cancel{2}\ 1} = 9$

$m = \mathbf{9}$

17. $\begin{array}{r} 180° \\ -\ 135° \\ \hline 45° \end{array}$

$a = \mathbf{45°}$

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

19. $\begin{array}{rl} \frac{3}{4} &= \frac{9}{12} \\ -\ \frac{1}{6} &= \frac{2}{12} \\ \hline \frac{7}{12} & \end{array}$

20. $\begin{array}{rl} 4\frac{1}{2} &= 4\frac{4}{8} \\ -\ \frac{3}{8} &= \frac{3}{8} \\ \hline 4\frac{1}{8} & \end{array}$

21. $\frac{3}{8} \cdot 2\frac{2}{5} \cdot 3\frac{1}{3}$

$= \frac{\cancel{3}^{1}}{\cancel{8}_{\cancel{2}_{1}}} \cdot \frac{\cancel{12}^{3}}{\cancel{5}_{1}} \cdot \frac{\cancel{10}^{\cancel{2}_{1}}}{\cancel{3}_{1}} = \mathbf{3}$

22. $2\frac{7}{10} \div 5\frac{2}{5} = \frac{27}{10} \div \frac{27}{5}$

$= \frac{\cancel{27}^{1}}{\cancel{10}_{2}} \times \frac{\cancel{5}^{1}}{\cancel{27}_{1}} = \mathbf{\frac{1}{2}}$

23. $5 \div 4\frac{1}{6} = \frac{5}{1} \div \frac{25}{6}$

$= \frac{\cancel{5}^{1}}{1} \times \frac{6}{\cancel{25}_{5}} = \frac{6}{5} = \mathbf{1\frac{1}{5}}$

24.
$$\begin{array}{r} 6\frac{1}{2} = 6\frac{3}{6} \\ -\ 2\frac{5}{6} = 2\frac{5}{6} \\ \hline \end{array} \longrightarrow \begin{array}{r} 5\frac{9}{6} \\ -\ 2\frac{5}{6} \\ \hline 3\frac{4}{6} \end{array}$$

$3\frac{4}{6} = \mathbf{3\frac{2}{3}}$

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

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

26.
$$\begin{array}{r} \mathbf{\$2.50} \\ 16\overline{)\$40.00} \\ \underline{32} \\ 80 \\ \underline{80} \\ 00 \\ \underline{00} \\ 0 \end{array}$$

27. (a) $54 - 54 = 0$

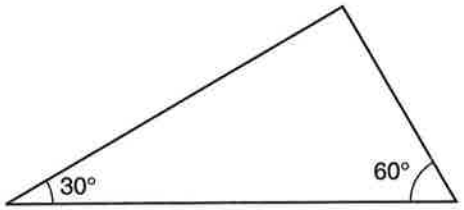
$y = \mathbf{0}$

(b) **Identity property of addition**

28. **The quotient will be greater than 1 because a larger number is divided by a smaller number.**

29. **The mixed numbers are greater than 8 and 5, so the sum is greater than 13. The mixed numbers are less than 9 and 6, so the sum is less than 15.**

30.



Lesson 34, Lesson Practice

a. **1.6 cm**

b. **16 mm**

c. $\frac{1}{2}$ **mm** or **0.5 mm**

d. **0.75 meter**

e. **157 centimeters**

f. **2.65**

g. **10.01**

h. **5 cm**

i. 3.5 cm + 1.2 cm = **4.7 cm**

j. 40 mm − 12 mm = **28 mm**

Lesson 34, Mixed Practice

1.
$$\begin{array}{r} 188 \text{ raisins} \\ 212 \text{ raisins} \\ +\ 203 \text{ raisins} \\ \hline 603 \text{ raisins} \end{array} \qquad \begin{array}{r} \mathbf{201 \text{ raisins}} \\ 3\overline{)603} \end{array}$$

2.
$$\begin{array}{r} 1032 \text{ parts per million} \\ -\ 497 \text{ parts per million} \\ \hline \mathbf{535 \text{ parts per million}} \end{array}$$

3.
$$\begin{array}{r} \$12.55 \\ +\ \$3.95 \\ \hline \mathbf{\$16.50} \end{array}$$

4.
$$\begin{array}{r} 1903 \\ +\ 66 \\ \hline \mathbf{1969} \end{array}$$

5. Perimeter $= 6(6 \text{ inches})$

$= 36 \text{ inches}$

$\frac{36 \text{ inches}}{4} =$ **9 inches**

6. $40\% = \frac{40}{100} = \frac{2}{5}$

	$4.00
$\frac{2}{5}$ is saved.	$0.80
	$0.80
$\frac{3}{5}$ is not saved.	$0.80
	$0.80
	$0.80

(a) $0.80 × 2 = **$1.60**

(b) $0.80 × 3 = **$2.40**

7. **First round 396 to 400 and 71 to 70. Then multiply 400 by 70.**

8. $7.493\underline{6}2 \longrightarrow$ **7.494**

9. (a) **Two hundred and two hundredths**

(b) **One thousand, six hundred twenty-five millionths**

10. (a) **0.000175**

(b) **3030.03**

11. (a) $6.174 < 6.17401$

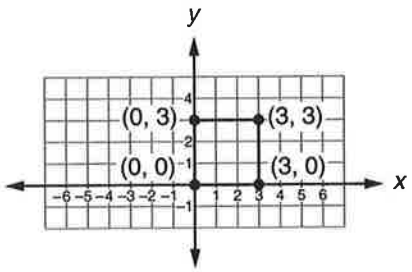
(b) $14.276 > 1.4276$

12. (a) **2.7 cm**

(b) **27 mm**

13. **8.25**

14.



(a) **(3, 0)**

(b) Area $= (3 \text{ units})(3 \text{ units})$

$=$ **9 units^2**

15. (a) **7.5**

(b) **0.75**

16. $\frac{\cancel{15}^{5} \cdot \cancel{20}^{\cancel{10}^{5}}}{\cancel{12}^{\cancel{6}^{\cancel{2}^{1}}}} = 25$

$y =$ **25**

17. $180° - 74° = 106°$

$c =$ **106°**

18. $\frac{5}{6} = \frac{5}{6}$

$\frac{2}{3} = \frac{4}{6}$

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

$\frac{12}{6} =$ **2**

19. $\frac{5}{36} = \frac{10}{72}$

$- \frac{1}{24} = \frac{3}{72}$

$\frac{7}{72}$

20. $5\frac{1}{6} = 5\frac{1}{6} \longrightarrow 4\frac{7}{6}$

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

$3\frac{3}{6}$

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

21. $\frac{1}{10} \cdot 2\frac{2}{3} \cdot 3\frac{3}{4}$

$= \frac{1}{\cancel{10}_{\cancel{5}\,1}} \cdot \frac{\overset{1}{\cancel{8}^{\cancel{2}}}}{\cancel{3}_{\,1}} \cdot \frac{\overset{1}{\cancel{15}^{\cancel{5}}}}{\cancel{4}_{\,1}} = \mathbf{1}$

22. $5\frac{1}{4} \div 1\frac{2}{3} = \frac{21}{4} \div \frac{5}{3}$

$= \frac{21}{4} \times \frac{3}{5} = \frac{63}{20} = \mathbf{3\frac{3}{20}}$

23. $3\frac{1}{5} \div 4 = \frac{16}{5} \div \frac{4}{1}$

$= \frac{\overset{4}{\cancel{16}}}{5} \times \frac{1}{\cancel{4}_{\,1}} = \mathbf{\frac{4}{5}}$

24.
$$\begin{array}{r} 6\frac{7}{8} = 6\frac{7}{8} \\ +\ 4\frac{1}{4} = 4\frac{2}{8} \\ \hline 10\frac{9}{8} = \mathbf{11\frac{1}{8}} \end{array}$$

25. $\frac{5}{\cancel{8}_{\,2}} \cdot \frac{\overset{1}{\cancel{3}}}{4} = \frac{5}{8}$

$\frac{1}{8} + \frac{5}{8} = \frac{6}{8} = \mathbf{\frac{3}{4}}$

26. (a) 3.6 cm − 2.4 cm = **1.2 cm**

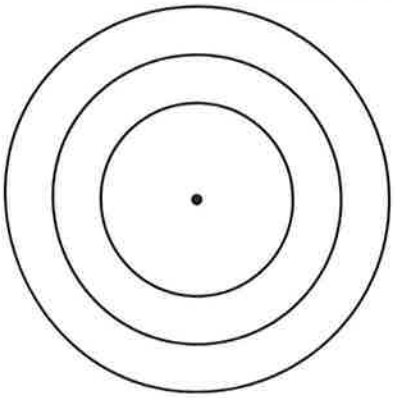
(b) 36 mm − 24 mm = **12 mm**

27. **A.** $\mathbf{2^5}$

28. **0.3575, 0.36, 0.365**

29. $\frac{10}{5} - 5 = 2 - 5 = \mathbf{-3}$

30. *Note:* Not actual size. See student work.



LESSON 35, LESSON PRACTICE

a.
$$\begin{array}{r} {\scriptstyle 1}1.2 \\ 3.45 \\ +\ 23.6 \\ \hline \mathbf{28.25} \end{array}$$

b.
$$\begin{array}{r} {\scriptstyle 1}4.5 \\ 0.51 \\ {\scriptstyle 1}6 \\ +\ 12.4 \\ \hline \mathbf{23.41} \end{array}$$

c.
$$\begin{array}{r} {\scriptstyle 2}0.2 \\ 0.4 \\ 0.6 \\ +\ 0.8 \\ \hline 2.0 = \mathbf{2} \end{array}$$

d.
$$\begin{array}{r} 3\,\cancel{0}^{\,5}.\,\cancel{2}^{\,11}\cancel{7}\,4 \\ -\ \ 5.\,3\,9 \\ \hline \mathbf{30.884} \end{array}$$

e.
$$\begin{array}{r} 1\,\cancel{6}^{\,5}.\,\cancel{7}^{\,16}\,\cancel{0}^{\,9}0 \\ -\ \ 1.\,9\,3\,4 \\ \hline \mathbf{14.766} \end{array}$$

f.
$$\begin{array}{r} 1\,\overset{1}{\cancel{2}}.\,\overset{9}{\cancel{0}}\,\overset{9}{\cancel{0}}0 \\ -\ \ 0.\,8\,7\,5 \\ \hline \mathbf{11.125} \end{array}$$

g.
$$\begin{array}{r} 4.20 \\ \times\ 0.24 \\ \hline 1680 \\ 840 \\ \hline 1.0080 = \mathbf{1.008} \end{array}$$

h.
$$\begin{array}{r} 0.12 \\ \times\ 0.06 \\ \hline \mathbf{0.0072} \end{array}$$

i.
$$\begin{array}{r} 5.4 \\ \times\ \ 7 \\ \hline \mathbf{37.8} \end{array}$$

j. $3 \times 2 \times 1 = 6$

$0.\underbrace{__6}_{3} \longrightarrow \mathbf{0.006}$

k.
$$\begin{array}{r} 0.04 \\ \times\ \ 10 \\ \hline 00 \\ 04 \\ \hline 0.40 \end{array} \longrightarrow \mathbf{0.4}$$

l.
$$\begin{array}{r} 0.045 \\ \times\ \ 0.6 \\ \hline 0270 \\ 000 \\ \hline 0.0270 \end{array} \longrightarrow \mathbf{0.027}$$

m.
$$\begin{array}{r} \mathbf{2.4} \\ 6\overline{)14.4} \\ 12 \\ \hline 24 \\ 24 \\ \hline 0 \end{array}$$

n.
$$\begin{array}{r} \mathbf{0.006} \\ 8\overline{)0.048} \\ 48 \\ \hline 0 \end{array}$$

o.
$$\begin{array}{r} \mathbf{0.68} \\ 5\overline{)3.40} \\ 30 \\ \hline 40 \\ 40 \\ \hline 0 \end{array}$$

p.
$$\begin{array}{r} \mathbf{0.05} \\ 6\overline{)0.30} \\ 30 \\ \hline 0 \end{array}$$

LESSON 35, MIXED PRACTICE

1. **Add all the bills together and divide by 6.**

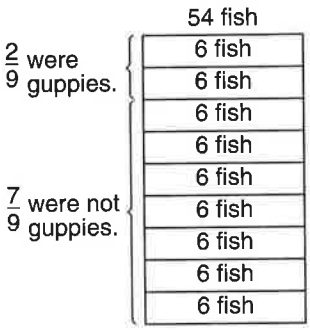
2.
$$2\tfrac{1}{2} = 2\tfrac{2}{4} \qquad - 1\tfrac{3}{4} = 1\tfrac{3}{4}$$
$$\longrightarrow \quad 1\tfrac{6}{4} \qquad - 1\tfrac{3}{4}$$
$$\mathbf{\tfrac{3}{4}\ gallon}$$

3.
$$\begin{array}{r} \$1.30 \\ 12\overline{)\$15.60} \\ 12 \\ \hline 36 \\ 36 \\ \hline 00 \\ 00 \\ \hline 0 \end{array} \qquad \begin{array}{r} \$1.75 \\ -\ \$1.30 \\ \hline \mathbf{\$0.45} \end{array}$$

4. 1 minute = 60 seconds
60 seconds + 3 seconds = 63 seconds
63 seconds − 5 seconds = **58 seconds**

5. Perimeter = 5(16 cm) = 80 cm
$\frac{80\text{ cm}}{4}$ = **20 cm**

6.



(a) 2(6 fish) = **12 fish**

(b) 7(6 fish) = **42 fish**

7. (a) Area = (10 cm)(10 cm) = **100 cm²**

(b) Area = (6 cm)(6 cm) = **36 cm²**

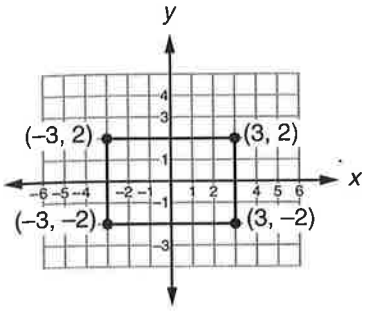
(c) Area = 100 cm² − 36 cm²
= **64 cm²**

8. (a) $\mathbf{\frac{99}{100}}$

(b) **0.99**

(c) $\frac{99}{100}$ = **99%**

9.



(a) **(3, 2)**

(b) Area = (4 units)(6 units)
= **24 units²**

10. (a) **One hundred and seventy-five thousandths**

(b) **0.00025**

11. (a) **3.5 centimeters**

(b) **35 millimeters**

12.
$$\begin{array}{r} \$1.50 \\ \times \quad 12 \\ \hline 3\,00 \\ 15\,0 \\ \hline \$18.00 \end{array}$$

13. **3.37**

14. **0.5 × 0.7 = 0.35**

15. **1.25**

16. $\frac{\overset{3}{\cancel{9}} \cdot \overset{2}{\cancel{10}}}{\underset{1}{\cancel{15}}} = 6 \qquad x = \mathbf{6}$

17.
$$\begin{array}{r} 5.83 \\ -\ 4.6 \\ \hline 1.23 \end{array}$$
$f = \mathbf{1.23}$

18.
$$\begin{array}{r} 5.8 \\ 8\overline{)46.4} \\ 40 \\ \hline 64 \\ 64 \\ \hline 0 \end{array}$$
$y = \mathbf{5.8}$

19.
$$\begin{array}{r} 12 \\ +\ 3.4 \\ \hline 15.4 \end{array}$$
$w = \mathbf{15.4}$

20.
$$\begin{array}{r} {\scriptstyle 1}3.65 \\ 0.9 \\ {\scriptstyle 1}8 \\ +\ 15.23 \\ \hline \mathbf{27.78} \end{array}$$

21.
$$\begin{array}{rl} 1\frac{1}{2} &= 1\frac{6}{12} \\ 2\frac{2}{3} &= 2\frac{8}{12} \\ +\ 3\frac{3}{4} &= 3\frac{9}{12} \\ \hline 6\frac{23}{12} &= \mathbf{7\frac{11}{12}} \end{array}$$

22. $1\frac{1}{2} \cdot 2\frac{2}{3} \cdot 3\frac{3}{4} = \frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{2}}} \cdot \frac{\overset{1}{\cancel{8}}}{\underset{1}{\cancel{3}}} \cdot \frac{15}{\underset{1}{\cancel{4}}} = \mathbf{15}$

23.
$$\begin{array}{rl} \frac{1}{2} &= \frac{3}{6} \\ +\ \frac{1}{3} &= \frac{2}{6} \\ \hline & \frac{5}{6} \end{array}$$

$$\begin{array}{rcl} 1\frac{1}{6} & \longrightarrow & \frac{7}{6} \\ -\ \frac{5}{6} & & -\ \frac{5}{6} \\ \hline & & \frac{2}{6} = \mathbf{\frac{1}{3}} \end{array}$$

24.
$$\begin{array}{rl} 3\frac{1}{12} &= 3\frac{1}{12} \\ -\ 1\frac{3}{4} &= 1\frac{9}{12} \\ \hline \end{array} \longrightarrow \begin{array}{r} 2\frac{13}{12} \\ -\ 1\frac{9}{12} \\ \hline 1\frac{4}{12} \end{array}$$

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

25.
$$\begin{array}{r} \mathbf{0.12} \\ 10\overline{)1.20} \\ 10 \\ \hline 20 \\ 20 \\ \hline 0 \end{array}$$

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

$\downarrow \qquad \downarrow$

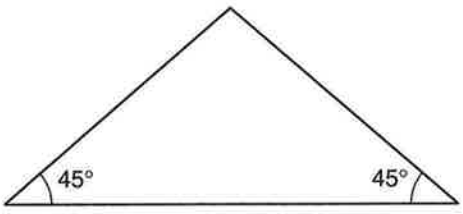
$4 \times 1 = \mathbf{4}$

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

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