

3. 451.221
4. 10.607
5. dollar; dimes; cents;  
\$1.00 + \$0.00 + \$0.09 = \$1.09
6. 6; 7; 5; \$6.00 + \$0.70 + \$0.05 = \$6.75
7.  $3^2 = 9$
8.  $4^3 = 64$
9.  $2^2 = 4$
10.  $10^3 = 1,000$
11.  $\frac{4}{5} = \frac{8}{10} = \frac{12}{15} = \frac{16}{20}$
12.  $\frac{3}{7} = \frac{6}{14} = \frac{9}{21} = \frac{12}{28}$
13.  $\frac{11}{22} \div \frac{11}{11} = \frac{1}{2}$
14.  $\frac{5}{25} \div \frac{5}{5} = \frac{1}{5}$
15.  $\frac{4}{16} \div \frac{4}{4} = \frac{1}{4}$
16.  $\frac{8}{32} \div \frac{8}{8} = \frac{1}{4}$
17. \$1.00 + \$0.40 + \$0.07 = \$1.47
18.  $100\text{¢} \div 5 = 20\text{¢}$ ;  
 $20\text{¢} \times 3 = 60\text{¢}$
19.  $\frac{2}{4} = \frac{1}{2}$  of a melon
20.  $10^2 = 100$  blocks

### Systematic Review 3F

1.  $1 \times 10^0 + 1 \times \frac{1}{10^3}$
2.  $1 \times 10^3 + 3 \times 10^2 + 5 \times 10^1 +$   
 $8 \times 10^0 + 9 \times \frac{1}{10^1} + 1 \times \frac{1}{10^2}$
3. 6,528.05
4. 2,000.986
5. dollars; dimes; cents;  
\$9.00 + \$0.80 + \$0.07 = \$9.87
6. dollars; dimes; cents;  
\$2.00 + \$0.00 + \$0.08 = \$2.08
7.  $3^4 = 81$
8.  $1^3 = 1$
9.  $10^0 = 1$

10.  $5^2 = 25$
11.  $\frac{9}{10} = \frac{18}{20} = \frac{27}{30} = \frac{36}{40}$
12.  $\frac{1}{6} = \frac{2}{12} = \frac{3}{18} = \frac{4}{24}$
13.  $\frac{5}{30} \div \frac{5}{5} = \frac{1}{6}$
14.  $\frac{14}{35} \div \frac{7}{7} = \frac{2}{5}$
15.  $\frac{20}{40} \div \frac{20}{20} = \frac{1}{2}$
16.  $\frac{18}{27} \div \frac{9}{9} = \frac{2}{3}$
17. \$6.00 + \$0.09 = \$6.09
18.  $100\text{¢} \div 100 = 1\text{¢}$ ;  
 $1\text{¢} \times 7 = 7\text{¢}$
19.  $\frac{9}{12} = \frac{3}{4}$  of the dishes
20.  $20 \text{ questions} \div 5 = 4$ ;  
 $4 \times 4 = 16$  questions

### Lesson Practice 4A

1. done
2. done
3. 1.53  
 $\frac{+1.12}{2.65}$
4. 2.17  
 $\frac{+0.31}{2.48}$
5. 1.8  
 $\frac{+1.0}{2.8}$
6. 3.2  
 $\frac{+0.4}{3.6}$
7. 1.13  
 $\frac{+1.68}{2.81}$
8. 1.67  
 $\frac{+0.42}{2.09}$

$$\begin{array}{r} 9. \quad 1.5 \\ +1.2 \\ \hline 2.7 \end{array}$$

$$\begin{array}{r} 10. \quad 2.1 \\ +0.8 \\ \hline 2.9 \end{array}$$

$$\begin{array}{r} 11. \quad 1.16 \\ +1.46 \\ \hline 2.62 \end{array}$$

$$\begin{array}{r} 12. \quad 3.90 \\ +0.02 \\ \hline 3.92 \end{array}$$

$$\begin{array}{r} 13. \quad 2.6 \\ +1.5 \\ \hline 4.1 \end{array}$$

$$\begin{array}{r} 14. \quad 1.8 \\ +1.3 \\ \hline 3.1 \end{array}$$

$$\begin{array}{r} 15. \quad 3.00 \\ +1.62 \\ \hline 4.62 \end{array}$$

$$\begin{array}{r} 16. \quad 4.48 \\ +0.10 \\ \hline 4.58 \end{array}$$

$$\begin{array}{r} 17. \quad \$4.51 \\ +\$0.35 \\ \hline \$4.86 \end{array}$$

$$\begin{array}{r} 18. \quad 1.5 \\ +2.72 \\ \hline 4.22 \text{ miles} \end{array}$$

**Lesson Practice 4B**

$$\begin{array}{r} 1. \quad 7.1 \\ + 6.2 \\ \hline 13.3 \end{array}$$

$$\begin{array}{r} 2. \quad 5.9 \\ +1.2 \\ \hline 7.1 \end{array}$$

$$\begin{array}{r} 3. \quad 2.45 \\ +5.07 \\ \hline 7.52 \end{array}$$

$$\begin{array}{r} 4. \quad 4.13 \\ +1.96 \\ \hline 6.09 \end{array}$$

$$\begin{array}{r} 5. \quad 7.0 \\ +2.8 \\ \hline 9.8 \end{array}$$

$$\begin{array}{r} 6. \quad 1.5 \\ + 9.3 \\ \hline 10.8 \end{array}$$

$$\begin{array}{r} 7. \quad 8.84 \\ + 3.09 \\ \hline 11.93 \end{array}$$

$$\begin{array}{r} 8. \quad 0.437 \\ +0.250 \\ \hline 0.687 \end{array}$$

$$\begin{array}{r} 9. \quad 8.8 \\ + 3.4 \\ \hline 12.2 \end{array}$$

$$\begin{array}{r} 10. \quad 6.2 \\ +0.4 \\ \hline 6.6 \end{array}$$

$$\begin{array}{r} 11. \quad 2.70 \\ + 9.41 \\ \hline 12.11 \end{array}$$

$$\begin{array}{r} 12. \quad 5.52 \\ +0.60 \\ \hline 6.12 \end{array}$$

$$\begin{array}{r} 13. \quad 3.9 \\ +4.0 \\ \hline 7.9 \end{array}$$

$$\begin{array}{r} 14. \quad 7.5 \\ +0.8 \\ \hline 8.3 \end{array}$$

$$\begin{array}{r} 15. \quad 4.15 \\ +3.00 \\ \hline 7.15 \end{array}$$

$$\begin{array}{r} \phantom{0}11 \\ 16. \quad 0.524 \\ +0.277 \\ \hline 0.801 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 17. \quad \$12.95 \\ +\$15.50 \\ \hline \$28.45 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 18. \quad 0.625 \\ +2.125 \\ \hline 2.750 \text{ gallons} \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 10. \quad 2.8 \\ +5.9 \\ \hline 8.7 \end{array}$$

$$\begin{array}{r} \phantom{0}11 \\ 11. \quad 7.48 \\ +1.93 \\ \hline 9.41 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 12. \quad 0.162 \\ +8.000 \\ \hline 8.162 \end{array}$$

$$\begin{array}{r} \phantom{0}8.7 \\ 13. \quad 8.7 \\ + 8.1 \\ \hline 16.8 \end{array}$$

$$\begin{array}{r} \phantom{0}6.0 \\ 14. \quad 6.0 \\ +0.1 \\ \hline 6.1 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 15. \quad 0.731 \\ + 0.402 \\ \hline 1.133 \end{array}$$

$$\begin{array}{r} \phantom{0}1125 \\ 16. \quad 1.125 \\ +0.112 \\ \hline 1.237 \end{array}$$

$$\begin{array}{r} \phantom{0}4.3 \\ 17. \quad 4.3 \\ +0.5 \\ \hline 4.8 \text{ bushels} \end{array}$$

$$\begin{array}{r} \phantom{0}2.045 \\ 18. \quad 2.045 \\ +0.5 \\ \hline 2.545 \text{ inches} \end{array}$$

**Lesson Practice 4C**

$$\begin{array}{r} \phantom{0}1 \\ 1. \quad 3.0 \\ + 9.8 \\ \hline 12.8 \end{array}$$

$$\begin{array}{r} \phantom{0}7.1 \\ 2. \quad 7.1 \\ +1.3 \\ \hline 8.4 \end{array}$$

$$\begin{array}{r} \phantom{0}11 \\ 3. \quad 1.95 \\ + 8.15 \\ \hline 10.10 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 4. \quad 3.51 \\ +2.68 \\ \hline 6.19 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 5. \quad 5.9 \\ +0.4 \\ \hline 6.3 \end{array}$$

$$\begin{array}{r} \phantom{0}4.1 \\ 6. \quad 4.1 \\ +3.0 \\ \hline 7.1 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 7. \quad 2.34 \\ +0.71 \\ \hline 3.05 \end{array}$$

$$\begin{array}{r} \phantom{0}0.440 \\ 8. \quad 0.440 \\ +0.300 \\ \hline 0.740 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 9. \quad 6.5 \\ + 5.0 \\ \hline 11.5 \end{array}$$

**Systematic Review 4D**

$$\begin{array}{r} \phantom{0}1 \\ 1. \quad 1.5 \\ + 9.3 \\ \hline 10.8 \end{array}$$

$$\begin{array}{r} \phantom{0}1 \\ 2. \quad 5.9 \\ +1.6 \\ \hline 7.5 \end{array}$$

$$\begin{array}{r} \phantom{0}6.34 \\ 3. \quad 6.34 \\ +2.41 \\ \hline 8.75 \end{array}$$

4. 
$$\begin{array}{r} 1 \\ 1.82 \\ + 9.3 \\ \hline 11.12 \end{array}$$
5.  $2^3 = 8$
6.  $6^2 = 36$
7.  $10^4 = 10,000$
8.  $7^2 = 49$
9.  $1 \times 100 + 7 \times 10 + 6 \times 1 + 2 \times \frac{1}{10} + 1 \times \frac{1}{100}$
10.  $6 \times \frac{1}{10} + 8 \times \frac{1}{100} + 5 \times \frac{1}{1,000}$
11.  $4 \times 1 + 5 \times \frac{1}{10}$
12.  $\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16}$
13.  $\frac{5}{8} = \frac{10}{16} = \frac{15}{24} = \frac{20}{32}$
14.  $\frac{1}{4} + \frac{3}{5} = \frac{5}{20} + \frac{12}{20} = \frac{17}{20}$
15.  $\frac{3}{4} + \frac{1}{6} = \frac{18}{24} + \frac{4}{24} = \frac{22}{24} = \frac{11}{12}$
16.  $\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15}$
17. 
$$\begin{array}{r} 11 \\ 75.25 \\ + 1.75 \\ \hline 77.00 \text{ inches} \end{array}$$
18.  $12 \div 6 = 2$  spoiled apples  
 $12 - 2 = 10$  good apples

**Systematic Review 4E**

1. 
$$\begin{array}{r} 11 \\ 8.6 \\ + 2.4 \\ \hline 11.0 \end{array}$$
2. 
$$\begin{array}{r} 3.0 \\ + 4.4 \\ \hline 7.4 \end{array}$$
3. 
$$\begin{array}{r} 11 \\ 3.07 \\ + 9.25 \\ \hline 12.32 \end{array}$$
4. 
$$\begin{array}{r} 5.00 \\ + 3.24 \\ \hline 8.24 \end{array}$$

5.  $3^4 = 81$
6.  $5^2 = 25$
7.  $1^7 = 1$
8.  $10^3 = 1,000$
9.  $4 \times 10^1 + 3 \times 10^0 + 3 \times \frac{1}{10^1}$
10.  $6 \times 10^0 + 1 \times \frac{1}{10^1} + 5 \times \frac{1}{10^3}$
11.  $2 \times 10^2 + 3 \times \frac{1}{10^1} + 4 \times \frac{1}{10^2}$
12.  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$
13.  $\frac{9}{10} = \frac{18}{20} = \frac{27}{30} = \frac{36}{40}$
14.  $\frac{1}{9} + \frac{1}{2} = \frac{2}{18} + \frac{9}{18} = \frac{11}{18}$
15.  $\frac{2}{5} + \frac{5}{6} = \frac{12}{30} + \frac{25}{30} = \frac{37}{30} = 1\frac{7}{30}$
16.  $\frac{1}{10} + \frac{2}{3} = \frac{3}{30} + \frac{20}{30} = \frac{23}{30}$
17. 
$$\begin{array}{r} 0.5 \\ + 0.25 \\ \hline 0.75 \text{ hours} \end{array}$$
18. 
$$\begin{array}{r} 11 \\ 9.5 \\ + 11.6 \\ \hline 21.1 \text{ gallons} \end{array}$$
19.  $\frac{2}{3} + \frac{1}{5} = \frac{10}{15} + \frac{3}{15} = \frac{13}{15}$  of the problems
20.  $30 \div 15 = 2$ ;  
 $2 \times 13 = 26$  problems

**Systematic Review 4F**

- |   |   |
|---|---|
| 1. $\begin{array}{r} 5.6 \\ + 4.3 \\ \hline 9.9 \end{array}$          | 4. $\begin{array}{r} 11 \\ 4.17 \\ + 1.95 \\ \hline 6.12 \end{array}$ |
| 2. $\begin{array}{r} 11 \\ 1.9 \\ + 9.2 \\ \hline 11.1 \end{array}$   | 5. $8^2 = 64$   |
| 3. $\begin{array}{r} 1 \\ 5.13 \\ + 9.50 \\ \hline 14.63 \end{array}$ | 6. $10^0 = 1$   |
|   | 7. $4^3 = 64$   |
|   | 8. $9^2 = 81$   |
|   | 9. 9,500.1  |
|   | 10. 158.004   |

11.  $\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12}$

12.  $\frac{3}{7} = \frac{6}{14} = \frac{9}{21} = \frac{12}{28}$

13.  $\frac{2}{7} + \frac{1}{8} = \frac{16}{56} + \frac{7}{56} = \frac{23}{56}$

14.  $\frac{3}{5} + \frac{2}{9} = \frac{27}{45} + \frac{10}{45} = \frac{37}{45}$

15.  $\frac{3}{4} + \frac{1}{5} = \frac{15}{20} + \frac{4}{20} = \frac{19}{20}$

16. 
$$\begin{array}{r} \phantom{0}^1 \\ \$2.25 \\ +\$1.69 \\ \hline \$3.94 \end{array}$$

17. 
$$\begin{array}{r} \phantom{0}^1 \\ \$ 4.00 \\ \$ 2.50 \\ +\$ 8.35 \\ \hline \$14.85 \end{array}$$

18.  $\frac{5}{15} = \frac{1}{3}$

19.  $\frac{3}{8} + \frac{1}{3} = \frac{9}{24} + \frac{8}{24} = \frac{17}{24}$ ; no

20.  $27 \div 9 = 3$ ;  
 $3 \times 5 = 15$  players

6. 
$$\begin{array}{r} \phantom{0}^4 \\ 5 \overline{) 10} \\ -2 \cdot 4 \\ \hline 2 \cdot 6 \end{array}$$

7. 
$$\begin{array}{r} \phantom{0}^1 \phantom{0}^5 \\ 2 \overline{) 13.6} \\ -9 \cdot 4 \phantom{3} \\ \hline 1 \phantom{4} \cdot 1 \phantom{7} \end{array}$$

8. 
$$\begin{array}{r} \phantom{0}^7 \\ 2 \overline{) 8} \\ -0 \cdot 6 \phantom{3} \\ \hline 2 \cdot 1 \phantom{8} \end{array}$$

9. 
$$\begin{array}{r} \phantom{0}^3 \\ 4 \overline{) 10} \\ -2 \cdot 6 \\ \hline 1 \cdot 4 \end{array}$$

10. 
$$\begin{array}{r} \phantom{0}^8 \\ 9 \overline{) 16} \\ - \phantom{0} \cdot 9 \\ \hline 8 \cdot 7 \end{array}$$

11. 
$$\begin{array}{r} 8.93 \\ -5.00 \\ \hline 3.93 \end{array}$$

12. 
$$\begin{array}{r} \phantom{0}^3 \phantom{0}^{16} \\ 4 \overline{) 17} \\ -1 \cdot 9 \phantom{8} \\ \hline 2 \cdot 7 \phantom{2} \end{array}$$

13. 
$$\begin{array}{r} \phantom{0}^6 \phantom{0}^{10} \\ \$ 7 \overline{) 17} \\ -\$ 2 \cdot 9 \phantom{8} \\ \hline \$ 4 \cdot 1 \phantom{9} \end{array}$$

14. 
$$\begin{array}{r} 5.75 \\ -1.50 \\ \hline 4.25 \text{ feet} \end{array}$$

15. 
$$\begin{array}{r} \phantom{0}^4 \phantom{0}^9 \\ 15 \overline{) 10} \\ - \phantom{0} \cdot 4 \cdot 5 \\ \hline 14 \phantom{5} \cdot 5 \text{ pounds} \end{array}$$

16. 
$$\begin{array}{r} \phantom{0}^4 \phantom{0}^{10} \\ 15 \overline{) 15} \\ - \phantom{0} \cdot 4 \cdot 2 \phantom{9} \\ \hline 10 \cdot 8 \phantom{6} \text{ seconds} \end{array}$$

**Lesson Practice 5A**

1. done

2. 
$$\begin{array}{r} \phantom{0}^7 \\ 18 \overline{) 7} \\ -4 \cdot 8 \\ \hline 13 \cdot 9 \end{array}$$

3. 
$$\begin{array}{r} \phantom{0}^8 \phantom{0}^{12} \\ 9 \overline{) 15} \\ -8 \cdot 4 \phantom{6} \\ \hline 0 \cdot 8 \phantom{9} \end{array}$$

4. 
$$\begin{array}{r} \phantom{0}^1 \phantom{0}^{11} \\ 2 \overline{) 21} \\ -9 \cdot 6 \\ \hline 1 \cdot 2 \cdot 4 \end{array}$$

5. 
$$\begin{array}{r} 6.4 \\ -5.3 \\ \hline 1.1 \end{array}$$

# Application and Enrichment Solutions

## Application and Enrichment 1G

1. sum
2. factors
3. product
4. quotient
5. G, B
6. F, optional: C, E
7. A, optional: E
8. H, optional: E
9. E, optional: A
10. B, optional: E
11. C, optional: E
12. D, optional: E
13. B, optional: A, E
14. 3X
15. 3G
16. 4Y
17. 11A

## Application and Enrichment 2G

1. Each expression has a value of 9.
2. always true
3. always true
4. sometimes false
5. always true
6. sometimes false
7. done
8.  $20 \times 6 = 120$   
 $4 \times 30 = 120$
9.  $6 + 7 = 13$   
 $9 + 4 = 13$
10.  $2 \div 2 = 1$   
 $12 \div 3 = 4$
11.  $5 - 3 = 2$   
 $10 - 2 = 8$

## Application and Enrichment 3G

1. 4
2. 5
3. 8
4. 9
5. 5

6. 1, 2, 3, 4, 6, 8, 12, 24
7. 1, 3, 9
8. 1, 3, 5, 9, 15, 45
9. 1, 2, 4, 8, 16
10.  $6(1) + 6(2)$
11.  $5(5) + 5(6)$
12.  $3(3) + 3(7)$
13.  $6(1 + 2) = 6(3) = 18$   
 $6 + 12 = 18$
14.  $5(5 + 6) = 5(11) = 55$   
 $25 + 30 = 55$
15.  $3(3 + 7) = 3(10) = 30$   
 $9 + 21 = 30$

## Application and Enrichment 4G

1.  $3(7) = 21$   
 $18 + 3 = 21$  The answers agree.
2.  $4(2 + 5) = 4(7) = 28$   
 $4(2) + 4(5) = 8 + 20 = 28$
3.  $2(10 + 6) = 2(16) = 32$   
 $2(10) + 2(6) = 20 + 12 = 32$
4.  $6(2 + 3) = 6(5) = 30$   
 $6(2) + 6(3) = 12 + 18 = 30$
5.  $7(8 + 4) = 7(12) = 84$   
 $7(8) + 7(4) = 56 + 28 = 84$
6.  $4(2) + 4(B) = 8 + 4B$
7.  $8(A) + 8(4) = 8A + 32$
8.  $2(X) + 2(Z) = 2X + 2Z$
9.  $7(A) + 7(2Y) = 7A + 14Y$
10.  $2(3) + 2(5B) = 2(3 + 5B)$
11.  $5(3) + 5(7X) = 5(3 + 7X)$
12.  $9(1) + 9(8Y) = 9(1 + 8Y)$

## Application and Enrichment 5G

1. Answers will vary. Both sides of final equation should match.  
Example:  
 $1 + 1 = 2(1); 2 = 2$   
 $5 + 5 = 2(5); 10 = 10$
2. Answers will vary. Both sides of final equation should match.
3. Answers will vary. Both sides of final equation should match.