LESSON PRACTICE

Add the decimal numbers. For better understanding, use the inserts to build some of the problems. (You may not have enough inserts for the problems with greater numbers.) The first two have been done for you.

1. 1.3 + 2.6 = 3.9

2. 1 2.9 + 1.2 = 4.1

3. 1.5 3 + 1.1 2

*4. 2.1 7 + 0.3 1

5. 1.8 + 1.0

6. 3.2 + 0.4

7. 1.1 3 + 1.6 8

8. 1.6 7 + 0.4 2

9. 1.5 + 1.2

10. 2.1 + 0.8

*It is customary to write a zero in the units place if there are no units. Students should understand that the initial zero does not change the value of the number.

11. $\begin{array}{r} 1.1\,6 \\ +\ 1.4\,6 \\ \hline \end{array}$

12. $\begin{array}{r} 3.9\,0 \\ +\ 0.0\,2 \\ \hline \end{array}$

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

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

15. $\begin{array}{r} 3.0\,0 \\ +\ 1.6\,2 \\ \hline \end{array}$

16. $\begin{array}{r} 4.4\,8 \\ +\ 0.1\,0 \\ \hline \end{array}$

17. Jon had $4.51 in one pocket and $0.35 in another pocket. How much money did he have in all? (When solving decimal problems, be sure to line up the decimal points.)

18. Emily drove 1.5 miles in the morning and 2.72 miles in the afternoon. How many miles has she driven today?

LESSON PRACTICE

Add the decimal numbers. Add thousandths just like regular addition and keep the decimal points lined up. (You might not have enough inserts to build the problems with greater decimal numbers.)

1. 7.1 + 6.2

2. 5.9 + 1.2

3. 2.4 5 + 5.0 7

4. 4.1 3 + 1.9 6

5. 7.0 + 2.8

6. 1.5 + 9.3

7. 8.8 4 + 3.0 9

8. 0.4 3 7 + 0.2 5 0

9. 8.8 + 3.4

10. 6.2 + 0.4

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

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

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

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

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

16. $\begin{array}{r} 0.524 \\ +\ 0.277 \\ \hline \end{array}$

17. Andrew bought a shirt for $12.95 and a pair of jeans for $15.50. How much did Andrew have to pay altogether?

18. Clyde sold 0.625 gallons of lemonade in the morning. The afternoon was hotter, and he sold 2.125 gallons of lemonade. How many gallons of lemonade did Clyde sell that day?

LESSON PRACTICE

Add the decimal numbers.

1. 3.0
   + 9.8

2. 7.1
   + 1.3

3. 1.9 5
   + 8.1 5

4. 3.5 1
   + 2.6 8

5. 5.9
   + 0.4

6. 4.1
   + 3.0

7. 2.3 4
   + 0.7 1

8. 0.4 4 0
   + 0.3 0 0

9. 6.5
   + 5.0

10. 2.8
    + 5.9

11. $\begin{array}{r} 7.48 \\ +\ 1.93 \\ \hline \end{array}$

12. $\begin{array}{r} 0.162 \\ +\ 8.000 \\ \hline \end{array}$

13. $\begin{array}{r} 8.7 \\ +\ 8.1 \\ \hline \end{array}$

14. $\begin{array}{r} 6.0 \\ +\ 0.1 \\ \hline \end{array}$

15. $\begin{array}{r} 0.731 \\ +\ 0.402 \\ \hline \end{array}$

16. $\begin{array}{r} 1.125 \\ +\ 0.112 \\ \hline \end{array}$

17. Jean bought 4.3 bushels of apples and 0.5 bushel of pears. How many bushels of fruit did she buy?

18. A meteorologist had a gauge that could measure rainfall to the thousandth of an inch. On Monday his gauge recorded 2.045 inches, and on Tuesday it recorded exactly 0.5 inch. How much rain fell during the last two days?

SYSTEMATIC REVIEW

Add the decimal numbers.

1. $\begin{array}{r} 1.5 \\ +\ 9.3 \\ \hline \end{array}$

2. $\begin{array}{r} 5.9 \\ +\ 1.6 \\ \hline \end{array}$

3. $\begin{array}{r} 6.3\ 4 \\ +\ 2.4\ 1 \\ \hline \end{array}$

4. $\begin{array}{r} 1.8\ 2 \\ +\ 9.3 \\ \hline \end{array}$

Rewrite each number without using an exponent.

5. $2^3 =$ ____

6. $6^2 =$ ____

7. $10^4 =$ ____

8. $7^2 =$ ____

Write in expanded notation.

9. 176.21 = _____

10. 0.685 = _____

11. 4.5 = _____

Fill in the missing numbers to make equivalent fractions.

12. $\frac{1}{4} = \frac{\quad}{8} = \frac{3}{\quad} = \frac{\quad}{16}$

13. $\frac{5}{8} = \frac{\quad}{\quad} = \frac{15}{24} = \frac{\quad}{\quad}$

QUICK REVIEW

Fractions with the same denominator may be added by adding the numerators. The ***Rule of Four*** is a Math-U-See process for finding a common denominator for two fractions with different denominators. Once the fractions have a common denominator, it is easy to add the fractions by adding the numerators.

Example 1

$\frac{8}{12}$ $\frac{2}{3} + \frac{1}{4}$ $\frac{3}{12}$

$\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$

Step 1: $3 \times 4 = 12$
Step 2: $3 \times 1 = 3$
Step 3: $4 \times 3 = 12$
Step 4: $4 \times 2 = 8$

Add. Simplify your answer if possible.

14. $\frac{1}{4} + \frac{3}{5} =$ ___

15. $\frac{3}{4} + \frac{1}{6} =$ ___

16. $\frac{1}{3} + \frac{2}{5} =$ ___

17. Peter is 75.25 inches tall, but Steve is 1.75 inches taller. How tall is Steve?

18. Mom bought a bag of 12 apples. She discovered that 1/6 of the apples were spoiled. How many apples were spoiled? How many unspoiled apples does Mom have?

SYSTEMATIC REVIEW

Add the decimal numbers.

1. $\begin{array}{r} 8.6 \\ +\ 2.4 \\ \hline \end{array}$

2. $\begin{array}{r} 3.0 \\ +\ 4.4 \\ \hline \end{array}$

3. $\begin{array}{r} 3.0\ 7 \\ +\ 9.2\ 5 \\ \hline \end{array}$

4. $\begin{array}{r} 5.0\ 0 \\ +\ 3.2\ 4 \\ \hline \end{array}$

Rewrite each number without using an exponent.

5. 3^4 = ____

6. 5^2 = ____

7. 1^7 = ____

8. 10^3 = ____

Write in exponential notation.

9. 43.3 = _____

10. 6.105 = _____

11. 200.34 = _____

Fill in the missing numbers to make equivalent fractions.

12. $\frac{1}{2} = \frac{\quad}{4} = \frac{3}{\quad} = \frac{\quad}{8}$

13. $\frac{9}{10} = \frac{\quad}{\quad} = \frac{\quad}{30} = \frac{36}{40}$

Add. Simplify your answer if possible.

14. $\frac{1}{9} + \frac{1}{2} = \_\_\_$

15. $\frac{2}{5} + \frac{5}{6} = \_\_\_$

16. $\frac{1}{10} + \frac{2}{3} = \_\_\_$

17. Fred spent 0.5 hour plowing the snow from his parking lot and 0.25 hour shoveling the snow from his front walk. How many hours did Fred spend on snow removal?

18. Blake bought 9.5 gallons of gasoline for his car and 11.6 gallons for his wife's car. How many gallons of gasoline did Blake buy altogether?

19. Oscar got 2/3 of his math problems correct. After checking his work, he corrected another 1/5 of the problems. What part of his math problems is now correct?

20. Oscar (#19) had 30 math problems in all. How many were correct when he finished checking his work?

SYSTEMATIC REVIEW

Add the decimal numbers.

1. $\begin{array}{r} 5.6 \\ +\ 4.3 \\ \hline \end{array}$

2. $\begin{array}{r} 1.9 \\ +\ 9.2 \\ \hline \end{array}$

3. $\begin{array}{r} 5.1\ 3 \\ +\ 9.5\ 0 \\ \hline \end{array}$

4. $\begin{array}{r} 4.1\ 7 \\ +\ 1.9\ 5 \\ \hline \end{array}$

Rewrite each number without using an exponent.

5. $8^2 =$ ____

6. $10^0 =$ ____

7. $4^3 =$ ____

8. $9^2 =$ ____

Write in decimal notation.

9. $9 \times 10^3 + 5 \times 10^2 + 1 \times \frac{1}{10^1} =$ _____

10. $1 \times 10^2 + 5 \times 10^1 + 8 \times 10^0 + 4 \times \frac{1}{10^3} =$ _____

Fill in the missing numbers to make equivalent fractions.

11. $\frac{1}{3} = \frac{\quad}{\quad} = \frac{3}{\quad} = \frac{\quad}{12}$

12. $\frac{3}{7} = \frac{\quad}{\quad} = \frac{\quad}{21} = \frac{\quad}{\quad}$

Add. Simplify your answer if possible.

13. $\frac{2}{7} + \frac{1}{8} =$ ___

14. $\frac{3}{5} + \frac{2}{9} =$ ___

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

16. Bria spent $2.25 on a gallon of milk and $1.69 on a loaf of bread. How much money did Bria spend in all?

17. John made $4.00 selling lemonade one day. That evening he got his allowance of $2.50. He already had $8.35 in his savings bank. How much money does John have in all?

18. Dad said that Jeremy must mow 5/15 of the lawn. How many thirds of the lawn must he mow?

19. Last evening Kelsey ate 3/8 of a pizza, and Riley ate 1/3 of a pizza. Is the amount of pizza Kelsey and Riley ate together equa1 to a whole pizza?

20. Twenty-seven players tried out for the team, but only 5/9 of them were chosen. How many players were chosen?

In an expression such as $2(3 + 4)$, one factor is 2, and the other factor is $(3 + 4)$. You can find the value of the expression in two different ways.

The first way is to add inside the parentheses first and then multiply the factors. This uses what you have learned about the order of operations.

$$2(3 + 4) = 2(7) = 14$$

The second way is to multiply each of the numbers in the parentheses by two and add the results. This works because of the Distributive Property of Addition over Multiplication.

$$(2)(3) + (2)(4) = 6 + 8 = 14$$

Find the value of each expression two different ways. Do the answers agree?

1. $3(6 + 1) = 3(7) =$

   $3(6 + 1) = 3(6) + 3(1) =$

2. $4(2 + 5) =$

   $4(2 + 5) =$

3. $2(10 + 6) =$

   $2(10 + 6) =$

4. $6(2 + 3) =$

   $6(2 + 3) =$

5. $7(8 + 4) =$

   $7(8 + 4) =$

The Distributive Property still applies when letters are used for unknown values. The expression 3(2 + X) has two factors. They are 3 and (2 + X). Since you don't know the value of X, you cannot add the numbers inside the parentheses. However, you can multiply each part of (2 + X) by three in order to write the expression another way.

3(2 + X) = (3)(2) + (3)(X) = 6 + 3X

The value of X is unknown, so the terms 6 and 3X cannot be added.

Rewrite each expression using the Distributive Property.

6. 4(2 + B) =

7. 8(A + 4) =

Here is an example with two unknowns: 4(A + B) = (4)(A) + (4)(B) = 4A + 4B

8. 2(X + Z) =

9. 7(A + 2Y) =

When two or more terms have a common factor, you can apply the Distributive Property in reverse to factor out the greatest common factor. Look for the greatest common factor of each term as you did in application and enrichment 3G.

In the expression 6 + 12Y, the GCF is six. The expression can be rewritten either as 6(1) + 6(2Y) or as 6(1 + 2Y).

Use the GCF to rewrite each expression using the Distributive Property in reverse.

10. 6 + 10B =

11. 15 + 35X =

12. 9 + 72Y =