Chapter 1

School-Home Letter

Vocabulary

evaluate To find the value of a numerical or algebraic expression

numerical expression A mathematical phrase that has numbers and operation signs but does not have an equal sign

order of operations The process for evaluating expressions

Dear Family,

Throughout the next few weeks, our math class will be learning about place value, number properties, and numerical expressions. We will also learn to multiply by 1- and 2-digit whole numbers.

You can expect to see homework that requires students to write and evaluate numerical expressions.

Here is a sample of how your child will be taught to evaluate an expression.

MODEL Evaluate Expressions

This is how we will be evaluating $36 - (2 + 3) \times 4$.

STEP 1	
Perform the operations in parentheses.	$36 - (2 + 3) \times 4$ $36 - \mathbf{5} \times 4$
STEP 2	
Multiply.	$36 - \mathbf{20}$
STEP 3	
Subtract.	16

$36 - (2 + 3) \times 4 = 16$

Tips

Order of Operations

To evaluate an expression, first perform the operations in parentheses. Next, multiply and divide from left to right. Finally, add and subtract from left to right.

Activity

You can write numerical expressions to describe situations around the house. For example, "We bought a case of 24 water bottles and have used 13 bottles. What expression shows how many are left?" can be represented by the expression $24 - 13$.

Name _____

Place Value and Patterns

COMMON CORE STANDARD—5.NBT.1
Understand the place value system.

Complete the sentence.

1. 40,000 is 10 times as much as 4,000.

2. 90 is $\frac{1}{10}$ of _____.

3. 800 is 10 times as much as _____.

4. 5,000 is $\frac{1}{10}$ of _____.

Use place-value patterns to complete the table.

Number	10 times as much as	$\frac{1}{10}$ of
5. 100		
6. 7,000		
7. 300		
8. 80		

Number	10 times as much as	$\frac{1}{10}$ of
9. 2,000		
10. 900		
11. 60,000		
12. 500		

Problem Solving Real World

13. The Eatery Restaurant has 200 tables. On a recent evening, there were reservations for $\frac{1}{10}$ of the tables. How many tables were reserved?

14. Mr. Wilson has $3,000 in his bank account. Ms. Nelson has 10 times as much money in her bank account as Mr. Wilson has in his bank account. How much money does Ms. Nelson have in her bank account?

Name _____

Place Value of Whole Numbers

COMMON CORE STANDARD—5.NBT.1
Understand the place value system.

Write the value of the underlined digit.

1. 5,1$\underline{6}$5,874

60,000

2. 2$\underline{8}$1,480,100

3. 7,$\underline{2}$70

4. 8$\underline{9}$,170,326

5. $\underline{7}$,050,423

6. 6$\underline{4}$6,950

7. 37,$\underline{1}$23,745

8. $\underline{3}$15,421,732

Write the number in two other forms.

9. 15,409

10. 100,203

11. 6,007,200

12. 32,005,008

Problem Solving Real World

13. The U.S. Census Bureau has a population clock on the Internet. On a recent day, the United States population was listed as 310,763,136. Write this number in word form.

14. In 2008, the population of 10- to 14-year-olds in the United States was 20,484,163. Write this number in expanded form.

Name _____

Properties

COMMON CORE STANDARD—5.OA.1
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Use properties to find the sum or product.

1. 6×89

$6 \times (90 - 1)$
$(6 \times 90) - (6 \times 1)$
$540 - 6$
534

2. $93 + (68 + 7)$

_____

3. $5 \times 23 \times 2$

_____

4. 8×51

_____

5. $34 + 0 + 18 + 26$

_____

6. 6×107

_____

Complete the equation, and tell which property you used.

7. $(3 \times 10) \times 8 =$ _____ $\times (10 \times 8)$

_____

_____

8. $16 + 31 = 31 +$ _____

_____

_____

9. $0 +$ _____ $= 91$

_____

_____

10. $21 \times$ _____ $= 9 \times 21$

_____

_____

Problem Solving Real World

11. The Metro Theater has 20 rows of seats with 18 seats in each row. Tickets cost $5. The theater's income in dollars if all seats are sold is $(20 \times 18) \times 5$. Use properties to find the total income.

_____

12. The numbers of students in the four sixth-grade classes at Northside School are 26, 19, 34, and 21. Use properties to find the total number of students in the four classes.

_____

Name _____

Powers of 10 and Exponents

COMMON CORE STANDARD—5.NBT.2
Understand the place value system.

Write in exponent form and word form.

1. $10 \times 10 \times 10$

exponent form: 10^3

word form: the third power of ten

2. 10×10

exponent form: _____

word form: _____

3. $10 \times 10 \times 10 \times 10$

exponent form: _____

word form: _____

Find the value.

4. 10^3

5. 4×10^2

6. 9×10^4

7. 10^1

8. 10^5

9. 5×10^1

10. 7×10^3

11. 8×10^0

Problem Solving Real World

12. The moon is about 240,000 miles from Earth. What is this distance written as a whole number multiplied by a power of ten?

13. The sun is about 93×10^6 miles from Earth. What is this distance written as a whole number?