Place Value and Patterns

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

Write the value of the underlined digit.

1. 5,1<u>6</u>5,874

60,000

2. 2<u>8</u>1,480,100

3. 7,<u>2</u>70

4. 89,1<u>7</u>0,326

5. <u>7</u>,050,423

6. 6<u>4</u>6,950

7. 37,<u>1</u>23,745

8. <u>3</u>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 MACC.5.NBT.2.6

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. $(3 \times 10) \times 8 = \underline{\hspace{1cm}} \times (10 \times 8)$

8. $16 + 31 = 31 + \underline{\hspace{1cm}}$

9. $0 + \underline{\hspace{1cm}} = 91$

10. $21 \times \underline{\hspace{1cm}} = 9 \times 21$

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.

Powers of 10 and Exponents

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?

_____

Multiplication Patterns

COMMON CORE STANDARD MACC.5.NBT.1.2

Understand the place value system.

Use mental math to complete the pattern.

1. $8 \times 3 = 24$

$(8 \times 3) \times 10^1 =$ **240**

$(8 \times 3) \times 10^2 =$ **2,400**

$(8 \times 3) \times 10^3 =$ **24,000**

2. $5 \times 6 =$ _____

$(5 \times 6) \times 10^1 =$ _____

$(5 \times 6) \times 10^2 =$ _____

$(5 \times 6) \times 10^3 =$ _____

3. $3 \times$ _____ $= 27$

$(3 \times 9) \times 10^1 =$ _____

$(3 \times 9) \times 10^2 =$ _____

$(3 \times 9) \times 10^3 =$ _____

4. _____ $\times 4 = 28$

$(7 \times 4) \times$ _____ $= 280$

$(7 \times 4) \times$ _____ $= 2,800$

$(7 \times 4) \times$ _____ $= 28,000$

5. $6 \times 8 =$ _____

$(6 \times 8) \times 10^2 =$ _____

$(6 \times 8) \times 10^3 =$ _____

$(6 \times 8) \times 10^4 =$ _____

6. _____ $\times 4 = 16$

$(4 \times 4) \times 10^2 =$ _____

$(4 \times 4) \times 10^3 =$ _____

$(4 \times 4) \times 10^4 =$ _____

Use mental math and a pattern to find the product.

7. $(2 \times 9) \times 10^2 =$ _____

8. $(8 \times 7) \times 10^2 =$ _____

9. $(9 \times 6) \times 10^3 =$ _____

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

11. $(5 \times 9) \times 10^4 =$ _____

12. $(4 \times 8) \times 10^4 =$ _____

13. $(8 \times 8) \times 10^3 =$ _____

14. $(6 \times 4) \times 10^4 =$ _____

15. $(5 \times 5) \times 10^3 =$ _____

Problem Solving REAL WORLD

16. The Florida Everglades welcomes about 2×10^3 visitors per day. Based on this, about how many visitors come to the Everglades per week?

_____

_____

17. The average person loses about 8×10^1 strands of hair each day. About how many strands of hair would the average person lose in 9 days?

_____

_____