Name: _____ Monday Warm-Up

1. Fill in the blanks:

10 x 10 = _____ 10 x 100 = _____

10 x 50 = _____ 100 x 50 = _____

40 x _____ = 400 _____ x 60 = 600

_____ x 10 = 1,000 _____ x 20 = 2,000

Some of you still don't understand what our base 10 number system is all about. Let's review.

Our number system uses only ten digits, {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}.

We use these digits to write any number no matter how large.

To do this we rely on what's called ***place value***.

The *value* of each digit in a number depends on its *place* in the number.

Each place in a number has a value.

The value of each of a number's digits is equal to its face value (the digit itself) times the value of the place it is in.

And the *value* of the number is the sum (total) of the *values* of all its digits.

For example, look at the number **325**. *What does it mean*?

It means **3 hundreds + 2 tens + 5 ones**.

325 = (3 x 100) + (2 x 10) + (5 x1) = 300 + 20 + 5

When we write a number in this way, as the sum of its digital values, we say we are writing it in *expanded notation*.

Let's write 4,444 in expanded notation. 4,444 = 4,000 + 400 + 40 + 4

Notice that as we move to the left (←), each digit 4 in the number 4,444 has a value that is 10 times (10x) the value of the digit 4 immediately to its right.

Every time you move a digit one place to the left, you multiply by 10. If you move a digit two places to the left, you multiply by ten twice. This is the same as multiplying by 100. If you move a digit three places to the left, you multiply by 10 three times. This is the same as multiplying by 1,000.

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Name: _____ Monday Warm-Up

1. Write the number 2,201 in expanded notation.

   In the number **2**,2̲01, the value of the bold **2** is ____ times the value of the underlined 2̲.

2. Write the number 1,710 in expanded notation.

3. In the number **1**,7̲10, the value of the bold **1** is ____ times the value of the underlined 1̲.

4. What is the value of the digit 6 in the number 6̲72? _____

   What is the value of the digit 6 in the number 4̲69? _____

   The value of the digit 6 in the number 6̲72 is _____times the value of the digit 6 in the number 4̲69.

5. What is the value of the digit 1 in the number **1**,243? _____

   What is the value of the digit 1 in the number 4,3**1**2? _____

   The value of the digit 1 in the number **1**,243 is _____ times the value of the digit 1 in the number 4,3**1**2.

6. What is the value of the digit 5 in the number 5̲,634? _____

   What is the value of the digit 5 in the number 4,5̲63? _____

   The value of the digit 5 in the number 5̲,634 is _____ times the value of the digit 5 in the number 4,5̲63.

7. The value of the bold **3** in the number, 2,**3**3̲7 is _____ times the value of the underlined 3̲.

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