**Scientific Notation Notes**

A number is expressed in scientific notation when it is in the form **a x 10n**

where **a** is between \_\_\_\_ and \_\_\_\_ and **n** is an \_\_\_\_\_\_\_\_\_\_\_.

**Example 1:** Write the width of the universe in scientific notation.

**210,000,000,000,000,000,000,000 miles**

Where is the decimal point now?

Where would you put the decimal to make this number be between 1 and 10?

How many decimal places did you move the decimal?

**When the original number is more than 1, the exponent is positive.**

The answer in scientific notation is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Example 2:** Express 0.0000000902 in scientific notation.

Where would the decimal go to make the number be between 1 and 10?

The decimal was moved how many places?

**When the original number is less than 1, the exponent is negative.**

The answer in scientific notation is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

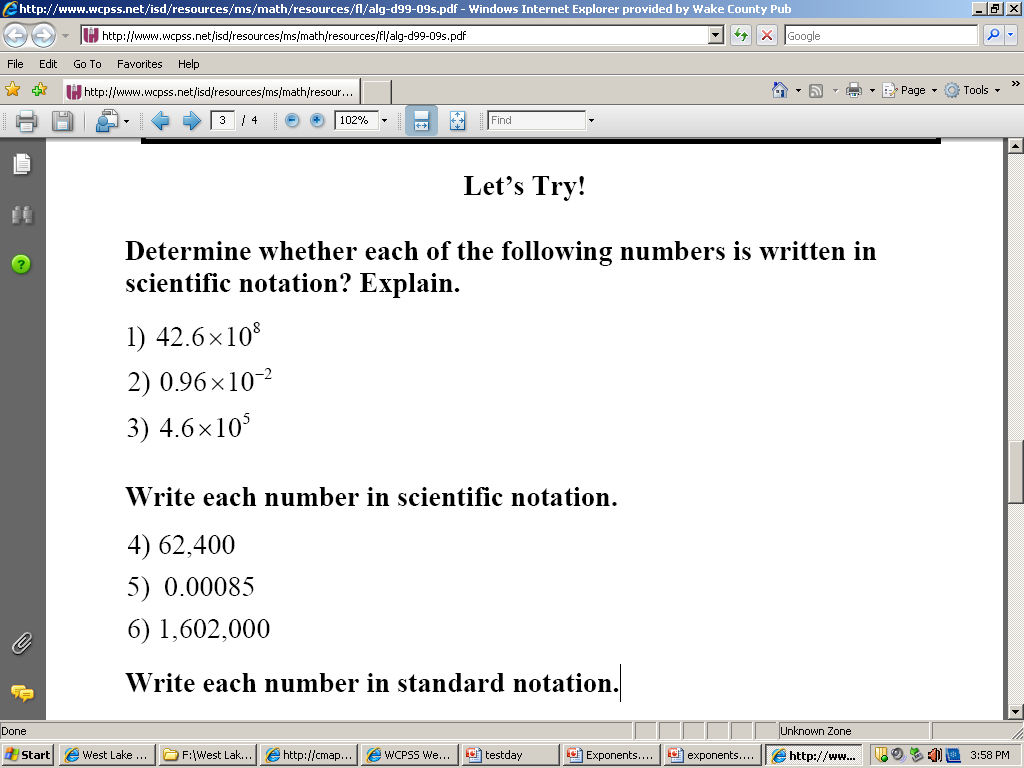
**Example 3:** Write 28750.9 in scientific notation.

**Example 4:** Express 1.8 x 10-4 in standard notation.

**Example 5:** Express 4.58 x 106 in standard notation.

**Scientific Notation Examples**

Determine whether each of the following numbers is written in scientific notation? Explain.



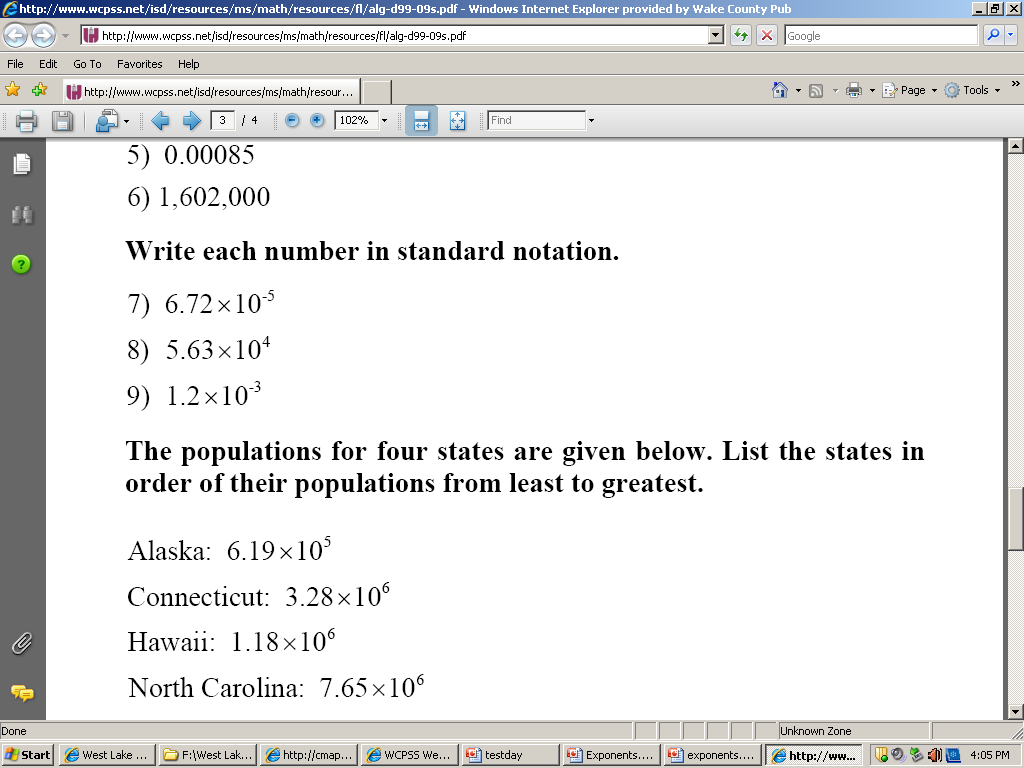
**Write each number in scientific notation.**

4) 62,400

5) 0.00085

6) 1,602,000

**Write each number in standard notation.**



**What does Scientific Notation look like on a calculator?**