

**Working with Numerical Data**

**RULES FOR ROUNDING OFF**

- The typical rule taught is that you \_\_\_\_\_  
\_\_\_\_\_
- When rounding, examine the figure following ( \_\_\_\_\_ ) the figure that is to be last
- This figure you are examining is the first figure to be \_\_\_\_\_
- Rules:
  - 1.
  - 2.

455.67 to four digits = \_\_\_\_\_  
 7987.782 to six digits = \_\_\_\_\_  
 86.47768 to two digits = \_\_\_\_\_  
 24.8514 to three digits = \_\_\_\_\_

**THE METRIC SYSTEM**

- There is only ONE unit of length →
- There is only ONE unit of mass →
- There is only ONE unit of liquid volume →

				BASE UNIT				
--	--	--	--	--------------	--	--	--	--



1. **If you are converting a number to a smaller unit, the number will get larger.**  
 Therefore, you should move the decimal to the right to make the number larger.  
 Count the number of spaces to see how many places you move the decimal.

Eg. 75 m = cm  
 440 g = mg  
 10 kL = L

2. **If you are converting a number to a larger unit, the number will get smaller.**  
 Therefore, you should move the decimal to the left to make the number smaller.  
 Count the number of spaces to see how many places you move the decimal.

Eg. 250 cm = m  
 45mL = L  
 1500mg = g

**SIGNIFICANT FIGURES**

There are three rules for determining how many significant figures are in a number:

1.

2.

3.

Examples: How many significant digits in the following?

a. 3.0800

b. 0.00418

c. 916000

d. 0.000780098

e. 0.00800

f. 7.0000001

**SCIENTIFIC NOTATION**

Sometimes numbers may be too large or too small. In these cases we may use scientific notation to rewrite our numbers. For example:

a. 900000

b. 6780000

c. 0.000045

d. 0.000000000089