

# Significant Figures Reference Sheet

For measured numbers, significant figures relate the certainty of the measurement. As the number of significant figures increases, the more certain the measurement.

## Rules for Counting

1. ALL non-zero numbers (1,2,3,4,5,6,7,8,9) are **ALWAYS significant**.  
Example: 15 = 2 sig figs  
145 = 3 sig figs
2. Zeros between nonzero digits are **ALWAYS significant**. (Squished zeros count!)  
Example: 105 = 3 sig figs  
5005 = 4 sig figs
3. ALL zeros to the left of the first non zero (1,2,3,4,5,6,7,8,9) are **not significant**.  
Example: 0.0005 = 1 sig fig  
0.0505 = 3 sig figs
4. If there is a **decimal**, zeros to the right of the last non zero are **ALWAYS significant**.  
Example: 2.0 = 2 sig figs  
0.500 = 3 sig figs

General Examples:

Number	# of Sig Figs	Rule(s)
48,923	5	1
3.923	4	1
900.06	5	1,2
0.0004	1	1,3
8.1000	5	1,4
501.040	6	1,2,4
3,000,000	1	1
10.0	3	1,4
0.004050	4	1,2,3,4

**ADDING AND SUBTRACTING:** Count the number of decimal places. Round to the lowest number of decimal places. Remember, if trying to remove a figure from an answer, round up if 5 or higher.

Examples:

$$2.5 + 1 = 3.5 \text{ which rounds to } 4$$

$$5.31 - 2.2 = 3.11 \text{ which rounds to } 3.1$$

**MULTIPLYING AND DIVIDING:** Count the number of significant figures. Round to the lowest number of significant figures. Remember, if trying to remove a figure from an answer, round up if 5 or higher.

Examples:

$$2.55 \times 2 = 5.1 \text{ which rounds to } 5$$

$$10.0 / 3.0 = 3.3333333 \text{ which rounds to } 3.3$$

$$16.5 / 3 = 5.5 \text{ which rounds to } 6$$