

# Sig Figs

Basics for sig figs -

Zeros are only significant if they're between two digits\* (as long as you're in scientific notation)

i.e. 6000.4 (5)

6000 (uncertain)  
6000. 1, 2, 3 or 4

$600. \times 10^1$  (3)

$6.00 \times 10^3$  (3)

Zeros to right of decimal  
are significant.

$6 \times 10^3$  (1)

Think precision of  
the instrument,  
when giving your answer.

\* After this, 2 decimal  
places for answers  
is acceptable \*

# BASIC Rules

## For Physics.

- All non zero digits are significant
- All zeros between 2 non zero digits are significant
- leading zeros or trailing zeros depend on the decimal place

6000. (4)

6000.0 (5)

## Operations w/ Sig Figs

add/sub → the answer should contain the least sig figs to the right of decimal  
(to the least leftmost sig fig on right side of num.)

$$\begin{array}{r} \text{1.P.} \quad 4.652 \\ + 15.5 \\ + 7.63982 \\ + 4. \\ \hline 31.79182 \\ = 32 \end{array}$$

For Multiplying + Div.

→ Final answer can only have same number of sig figs as the least # in the problem

$$\begin{aligned} \text{i.e. } & 6.43 \times 5.2987 \times 6.18 \\ & = 210.557 \\ & = 211. \\ & = 2.11 \times 10^2 \end{aligned}$$

$$\begin{array}{r}
 2.0 \\
 + 496.45 \\
 - 6.82 \\
 \hline
 505.27 \\
 505
 \end{array}$$

4.