**Significant Figures Rules:**

* All non-zero numbers are significant (#1-9)
* Any zeros between two significant figures are significant (101, 1001)
* Trailing zeros are only significant if they follow a non-zero number AND a decimal point (1.00, 10.00)

**Calculations with Significant Figures:**

* Addition & Subtraction: answer contains the amount of decimal places of the number with the least amount of decimal places. (5.455 + 1.0 = 6.455 = **6.5**)
* Multiplication & Division: answer contains the amount of significant figures as the number with the least number of significant figures. (1.500 x 2 = 3.000 = **3**)

**Rounding numbers:**

* If the number after the last significant figure is 5 or above, round up (if rounding to the tenths place then 7.55 = 7.6)
* If the number after the last significant figures is below 5, it stays the same (if rounding to the tenths place then 7.54 = 7.5)

**Complex Calculations with Sig Figs:**

* Complete the correct order of operations.
* Round sig figs anytime you switch between the addition/subtraction rule and the multiplication/division rule.

**Scientific Notation:**

* Put all answers in scientific notation to the correct number of significant figures.

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**Practice Problems:**

How many significant figures are in the following measurements?

1. 43.6 m
2. 30.456
3. 101
4. 0.056
5. 2.300
6. 0.00200

Round the following numbers to 3 significant figures.

1. 2359
2. 1.2305
3. 0.050091
4. 893256

Calculate and give the answer with the correct number of significant figures

1. 3.256 / 2.7 =
2. 14.88 \* 3.77 =
3. 12.699 \* 5 =
4. 1.333 + 2.62 =
5. 14.365 + 259.1 =
6. 2.3 – 1.1 + 3.563 =
7. 15.8 –12.3 =

5.698

1. 14.8855 =

3.329 – 23.6

1. 45.6 \* 1.25 =
2. (7.34 x 102) (3.18 x 10-4) =

3.1 x 103

1. 2.6342 x (6.022 x 1023) =
2. + 35.25
3. (0.8 – 0.0985) \* 72.65 =

