Mathematical Computations with Significant Figures
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Addition
When performing addition, the answer should contain no more decimal places than the number with the least number of digits following the decimal place.

**Example 1**: When you add 0.116 mm and 0.007 mm the answer would be 0.123 mm. Notice when dealing with addition it does not matter that one measurement had three significant figures while the other had only one significant figure. What matters is that both measurements go out to the thousandths place i.e. only the thousandth place number is estimated. Therefore the answer also extends to the thousandths place.

**Example 2**: If you added 31.102 ml and 4.2 ml the answer would be 35.3 ml. Again the first number had 5 significant figures while the second two. The answer has three significant figures because when doing addition we are only concerned with the number of decimal places to the right of the decimal point. Since the least accurate original measurement was to the tenths (4.2 ml), the answer can’t be more accurate than to the tenths.

Subtraction
Subtraction is similar to addition. Again the answer should contain no more decimal places than the number with the least number of digits following the decimal place.

**For example**: When subtracting 4.887 g from 10.6 g the answer would be 5.7 g. Since the least accurate original measurement was to the tenths position the answer cannot be more accurate and thus is also to the tenths position. It does not matter that the first measurement had four significant figures, the second three significant figures and the answer only two significant figures.

Multiplication and Division
When performing multiplication or division involving numbers with different levels of significant figures, the answer should be expressed only with the precision of the number in the calculation that shows the least number of significant figures.

**For example**: If you want to calculate the weight of 5.41 ml of water and you are told the density of water is 0.9976 g/ml, you would multiply the density times the volume to obtain the weight. The answer correctly rounded would be 5.40 g not 5.397016 g.