

Using Significant Figures

Adding or Subtracting

The sum or difference of measurements must contain as many decimal places as there are in the measurement containing the least number of decimal places.

- $38.102 \text{ cm} + 18.9984 \text{ cm} = 57.1004 \text{ cm} = 57.100 \text{ cm}$

If you are not sure about the rounding, check out Tutorials.

Be aware that when adding or subtracting measurements, the measurements must be in the same units.

- $55.320 \text{ g} - 6 \text{ g} = 49.320 \text{ g} = 49 \text{ g}$

Sometimes the rules for significant figures may give your answers a rather strange look.

Multiplying or Dividing

The product or quotient must contain the same number of significant figures as the measurement with the least number of significant figures.

- $34.2051 \text{ mm} \times 3.22 \text{ mm} = 110.140422 \text{ mm}^2 = 110. \text{ mm}^2$

Be aware that when multiplying measurements, the measurements must be in the same units.

- $57.9 \text{ g}/7.41 \text{ mL} = 7.81 \text{ g/mL}$

Be aware that when dividing measurements, the measurements need not be in the same units.