

SCIENTIFIC (CHEMICAL) CALCULATIONS

significant figures

convey precision of a measurement

scientific notation

most reliable way to express significant figures

Significant Figures in Calculations

adding & subtracting - answer has the same number of decimal places as the measurement with the least number of decimal places

multiplying & dividing - answer has the same number of significant figures as the measurement with the least number of significant figures

Rounding an Answer

adjusting the last digit of an answer to give correct number of decimal places or significant figures

Exact Numbers

numbers that are not measurements (counting or defining); don't affect significant figures in answer

Unit Prefixes

written before a unit, indicate a power of 10

Unit Systems

English System (pounds, feet)

International System "SI" (kilograms, meters)

Dimensional Analysis - Factor Label Method

Calculation set up as a series of ratios, with units carried along in calculation