

Extra Scientific Notation and Significant Figures Problem

Aug 23, 2022

Scientific Notation

1) Perform the following calculations without your calculator. Report to 2 significant figures.

a) $(4.0 \times 10^{-2})(1.5 \times 10^4)$

b) $(3.0 \times 10^5)^2$

c) $1.8 \times 10^4 - 8.9 \times 10^1$

Number of Significant Figures

2) Determine the number of significant figures in the following:

a) 0.060580

b) 6709.201

c) 14800

Combining Operations and Significant Figures

3) Using a calculator, express the answers to the following calculations with the proper number of significant figures:

a) $\frac{1202}{14.83+7.6}$

b) $\frac{1.0 \times 10^{-2} \text{g} - 1.2 \times 10^{-3} \text{g}}{1.579 \times 10^{-1} \text{cm}}$

c) $(9.2 \times 11.7) + 5.98$

d) $(6.2 \text{g/mL} \times 1.95 \text{mL}) + 0.73 \text{g}$