CHEM 1101 – Practice Problems: Significant Figures

Assume all values are measured values unless you are told otherwise, or unless the value represents a mathematical operation such as an inversion. e.g., $\frac{1}{327} = (327)^{-1}$; the 1 is exact.

1.

a. $\dfrac{(4.034)(2.0)}{(2.57)(6.44)}$

b. $\dfrac{\left(4.034\times10^{-6}\right)\left(2.0\times10^{3}\right)}{(2.57\times10^{-8})(6.44\times10^{-4})}$

c. 3.242 cm + 0.6417 cm + 7.197 cm + 0.003 cm

d. $6.574\text{x}10^{-24}$ kg + $8.86\text{x}10^{-26}$ kg + $4.23\text{x}10^{-27}$ kg + $5.8\text{x}10^{-28}$ kg

e. $\dfrac{48.72\times10^{3}\,J/mol}{8.314\,J/mol\cdot K}\left(\dfrac{1}{423.7K}-\dfrac{1}{398.2K}\right)$

f. ln(x) = 8.74; x =

g. $-\log(6.782\text{x}10^{-4})$ =