

# Chemistry 120 Quiz 1 – Spring 2017

**1 Determine the number of significant figures in the following values:**

- A 190.802 mL 6                      B 7 whales 0 / Exact Number           
C 0.0010120 lb 5  
D 5215 miles 4

**2 Round the following values to 3 significant figures:**

- A 3.68801 3.69                      B 0.0421975 0.0422                      C 8.75430 8.75  
D  $4.0098 \times 10^{-12}$   $4.01 \times 10^{-12}$

**3 Perform the following unitless calculations and round the final answer to the proper number of significant figures. Assume that all of the numbers came from measurements.**

- A  $3.41 - 0.086652 =$  3.32                      B  $16 \times 841.4 \div 16.300 =$  830 or  $8.3 \times 10^2$   
C  $21.01 \times 2.0 =$  42                      D  $14.044 + 8.11 \times 3.4 =$  42

**4 Convert the following values into scientific notation, or if given in scientific notation, convert back to a regular number:**

- $52,000$   $5.200 \times 10^4$                        $250,000,000,000,000,000,000$   $2.50 \times 10^{20}$   
b)  $0.0006$   $6 \times 10^{-4}$                       d)  $0.0000009548$   $9.548 \times 10^{-7}$

**5 Perform the following mathematical operations**

$$\frac{10^4}{10^{-13}} = \underline{10^{17}}$$

**6 Perform the following operations and express each answer in scientific notation:**

$$(3.5 \times 10^{13}) (7.1 \times 10^{-6}) = \underline{2.5 \times 10^8}$$