Significant Figures 2 **Name_____**

Chemistry / Bly **Hour ___ Date_____**

1. Determine the number of significant figures in each of the following.

Note: to count sig figs in scientific notation, totally ignore the "times ten to the something" part.

a.	**3427**	**e.**	**0.00456**	**i.**	**123,453**
b.	**1720**	**f.**	**0.00098400**	**j.**	**0.5020**
c.	**8.0600×10^{5}**	**g.**	**6.626×10^{-34}**	**k.**	**107.2**
d.	**0.0000405**	**h.**	**2205.20**	**l.**	**2.99792458×10^{8}**

2. Round each of the following to 3 significant figures.

a.	**77.0653**	**d.**	**501**
b.	**0.00023961**	**e.**	**499.6**
c.	**2.895×10^{21}**	**f.**	**6,300,178.2**

3. Determine each answer using the correct number of significant figures.

a.	**17.34 + 4.900 + 23.1**	**c.**	**3.9 × 6.05 × 420**
b.	**9.80 – 4.762**	**d.**	**14.1 / 5.00000**

4. Give each answer in correct scientific notation with correct number of significant figures

a. **$2.34\times10^{65} + 9.2\times10^{66}$**

b. **$313.0 - 1.2\times10^{3}$**

c. **$(3.5\times10^{400}) \times (2.45\times10^{900})$**

On these problems, remember to show work, circle answers, include units, and consider significant figures.

5. a. A rectangular classroom is 14 feet wide and 20 feet long. Find the area in square feet.

b. A library contains 30,000 books. The librarian buys 700 more books, and throws away 150 older books. How many will books will then be in the library?

6. A chemistry student orders four cups of coffee and measures their masses as 372.58 g, 372.65g, 372.51 g, and 372.62 g. Find the average.