ABUNE GORGORIOUS SECONDERY SCHOOL

DEPARTMENT OF NATURAL SCIENCE



2016 E.c First Semester Chemistry 1st round work sheet for Grade 9th

1. Write the branch of chemistry and explain its study?
2. Describe the application of chemistry in the field of agriculture, medicine, food production and building construction?
3. A sample of matter exist at -40F what about the temperature in C and K?
4. How many atoms are present in 22g of CO_2? The mas of C=12 O=16
5. A student measure the diameter of a metal using a ruler graduated in mm and records these results. Reading1=56 reading2=55 reading3=51 calculate the uncertainty by using half range, using the reading furthest from the mean and resolution of the instrument the absolute uncertainty of the instrument is 0.05g.
6. 43.7ml of water measured in 100ml of graduated cylinder the absolute uncertainty is 0.4ml.determine the % uncertainty of the measurement.
7. Yordanos want to determine the mass of aspirin tablet, the true mass of the tablet is 0.470g.she measure three times in different balance.

Trial	balance 1	balance 2	balance 3
1	0.446	0.468	0.470
2	0.442	0.486	0.481
3	0.444	0.449	0.482

   A. Which balance is precise and accurate?
   B. Which one is not precise and accurate?
8. Determine the number of significant figures in each of the following measurement?
   A.0.005 B.60156 C.$9.50 * 10^4$cm D. 10.001cm^3
   E.6.25* 1.175
9. Convert the following prefixes
   A.0.0712cm^3 to dm3 C. 0.65ng to ug
   B. $6.72 * 10^{-7}$cm to nm D. 6.54m^3 to uL
10. Write the scientific method steps?
11. Define the terms industry, chemical industry, and chemical products.
12. Mention at least 10 chemical industries found in Ethiopia and their chemical Products.
13. Percent error is often expressed as the absolute value of the difference between the true value and the experimental value, divided by the true value:

$$\text{Percent error} = \frac{|\text{True value} - \text{Experimental value}|}{|\textbf{True value}|} \times 100$$

Calculate the percent error for these Measurements:

a. The density of alcohol (ethanol) is found to be 0.802 g/mL. (True value: 0.798 g/mL.)

b. The mass of gold in an earring is analyzed to be 0.837 g. (True value: 0.864 g.)