

Chem11 Moles : Quiz-90

1) Find the molar mass (to 1 decimal place) of a) P_2S_5 _____ , b) $Pb(NO_3)_2$ _____

2) How many moles of compound are in :

a) 0.0034 g of $MgCl_2$ _____ b) 8.6×10^3 g of H_2SO_4 _____

3) How many moles of table salt ($NaCl$) are in a 1.00 kg package ?
_____ .

4) A gold coin with a mass of 28.0 g costs \$410. Find the cost of one mole of gold purchased this way. _____

5) Find the number of moles in :

a) 2.6×10^{27} molecules of sugar. b) 9.3×10^{11} atoms of manganese.

6) Give the mass (in grams) of :

a) 5.5 moles of rubidium _____ b) 8.1×10^{-4} moles of hydrogen sulfide _____

7) Calculate the number of atoms in 1.00 gram of :

a) carbon _____ b) $FeSO_4$ _____ c) Br_2 _____

8)a) Calculate the percentage of iron (by mass) in Fe_3O_4 . _____

b) Find the number of iron atoms in 0.00200 grams of Fe_3O_4 . _____

9)a) Find the percentage composition of $CaCO_3$ by mass.

_____ % Ca, _____ % C, _____ % O.

b) What mass (in g) of $CaCO_3$, contains 15.0 g of carbon ?

10) Find the empirical formula of the compound with the following percentage compositions (by mass).

a) 5.9 % H, 94.1 % S, b) 34.4 % Fe, 65.6 % Cl, c) 85.7 % Fe, 14.3 % N.

Answers : 1)a) 222.2, b) 331.2, 2)a) 3.6×10^{-5} , b) 88, 3) 17.1, 4) \$2880, 5)a) 4300, b) 1.5×10^{-12} , 6)a) 470, b) 0.028, 7)a) 5.01×10^{22} , b) 2.38×10^{22} , c) 7.53×10^{21} , 8)a) 72.4%, b) 1.56×10^{19} , 9)a) 40.0, 12.0, 48.0, b) 125, 10)a) H_2S , b) FeCl_3 , c) Fe_3N_2 .