

TEST REVIEW

- How many atoms of chlorine are present in a molecule of carbon tetrachloride, CCl_4 ?
 - 1
 - 2
 - 4
 - 5
- What is the formula mass of $(\text{NH}_4)_2\text{SO}_4$?
 - 114.09 amu
 - 118.34 amu
 - 128.06 amu
 - 132.13 amu
- What is the molar mass of copper (II) sulfate, CuSO_4 ?
 - 446.44 g/mol
 - 159.61 g/mol
 - 111.61 g/mol
 - 108.075 g/mol
- The molar mass of CCl_4 is 153.81 g/mol. How many grams of CCl_4 are needed to have 5.000 mol?
 - 5 g
 - 30.76 g
 - 769.0 g
 - 796.05 g
- The molar mass of CCl_4 is 153.81 g/mol. How many moles CCl_4 are present in 101.37 g?
 - 0.6591 mol
 - 1.517 mol
 - 2.157 mol
 - 36.32 mol
- A formula that shows the simplest whole number ratio of the atoms in a compound is the
 - molecular formula
 - ideal formula
 - structural formula
 - empirical formula
- A compound contains 64 g of O and 4 g of H. What is the empirical formula for this compound?
 - H_2O
 - H_2O_2
 - HO_2
 - HO
- A compound's empirical formula is CH_3 . If the formula mass is 30 amu, what is the molecular formula?
 - CH_3
 - CH_4
 - C_2H_6
 - C_3H_9

9. A molecular compound has the empirical formula XY_3 . Which of the following is a possible molecular formula?
- X_2Y_3
 - XY_4
 - X_2Y_5
 - X_2Y_6
10. What is the percent composition of CF_4 ?
- 20% C, 80% F
 - 13.6% C, 86.4% F
 - 16.8% C, 83.2% F
 - 81% C, 19% F
11. The molecular formula for vitamin C is $C_6H_8O_6$. What is the empirical formula?
- CHO
 - CH_2O
 - $C_3H_4O_3$
 - $C_2H_4O_2$
12. Find the molecular formula of ethylene glycol, which is used as antifreeze. The molar mass is 62 g/mol and the empirical formula is CH_3O .
- CH_3O
 - $C_2H_3O_2$
 - $C_2H_6O_2$
 - $C_2H_2O_6$
13. How many moles are in 235 grams of $Ca(OH)_2$?
- 3.17
 - 4.12
 - 10.49
 - 5.34
 - e.
14. How many particles are found in 2.5 moles of NaCl?
- 1.5×10^{24}
 - 2.4×10^{23}
 - 3.33×10^{-24}
 - 6.02×10^{-42}
15. How many liters are in 5.4 moles of Cl_2 at STP?
- 121
 - 152
 - 378
 - .07
16. How many moles are in 23L of F_2 at STP?
- 874
 - .6
 - 1.03
 - 437