

Molar Mass & Percent Composition

Name: _____

Part 1: Determine the molar masses of the following compounds:

- | | |
|----------------------------------|--|
| 1) octane, C_8H_{18} _____ | 5) silicon dioxide, SiO_2 _____ |
| 2) nitric acid, HNO_3 _____ | 6) methanol, CH_3OH _____ |
| 3) glucose, $C_6H_{12}O_6$ _____ | 7) carbon tetrachloride, CCl_4 _____ |
| 4) chlorine gas, Cl_2 _____ | 8) sulfuric acid, H_2SO_4 _____ |

Part 2: Determine the formulas and the molar masses of the following compounds:

| Name | Formula | Molar Mass |
|-----------------------|---------|------------|
| manganese (IV) oxide | | |
| sodium sulfate | | |
| potassium phosphate | | |
| nickel (III) fluoride | | |
| silver nitrate | | |
| barium chloride | | |

Part 3: Show set up and all work (including units) in order to receive full credit.

3) Find the percent composition of each element in a compound that contains 1.51 g Cr, 1.13 g K, and 1.62 g O.

5) How many grams of each substance are in a 5.90 g sample that contains 45.5 % lead, 12.3 % nitrogen and 42.2 % O?

6) What is the percent composition of each element in the compound potassium peroxide, K_2O_2 ?

Molar Mass & Percent Composition

Name: _____

Part 1: Determine the molar masses of the following compounds:

- | | |
|--------------------------------------|--|
| 1) butane, C_4H_{10} _____ | 5) glycerine, $C_3H_5(OH)_3$ _____ |
| 2) ammonia, NH_3 _____ | 6) naphthalene, $C_{10}H_8$ _____ |
| 3) sugar, $C_{12}H_{22}O_{11}$ _____ | 7) aspartame, $C_{14}H_{18}N_2O_5$ _____ |
| 4) acetic acid, $HC_2H_3O_2$ _____ | 8) salt, $NaCl$ _____ |

Part 2: Determine the formulas and the molar masses of the following compounds:

| Name | Formula | Molar Mass |
|-----------------------|---------|------------|
| ammonium carbonate | | |
| titanium (IV) oxide | | |
| barium phosphate | | |
| iron (III) nitrate | | |
| molybdenum (VI) oxide | | |
| calcium bromide | | |

Part 3: Show set up and all work (including units) in order to receive full credit.

3) Find the percent composition of each element in the compound magnesium nitrate.

5) How many grams of each substance are in a 15.80 g sample that contains 57.4 % tin, 11.6 % carbon and 31.0 % oxygen?

6) What is the percent composition of each element in a mole of the compound potassium dichromate?