

CALCULATING MOLAR MASS AND MOLE PRACTICE

CALCULATE THE MOLAR MASSES OF THE FOLLOWING: (unit: g/mol)

Copper (II) nitride



Beryllium fluoride



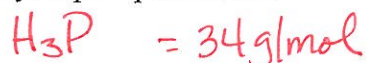
Boric acid



Lithium hydride



Hydrophosphoric acid



Dinitrogen pentoxide



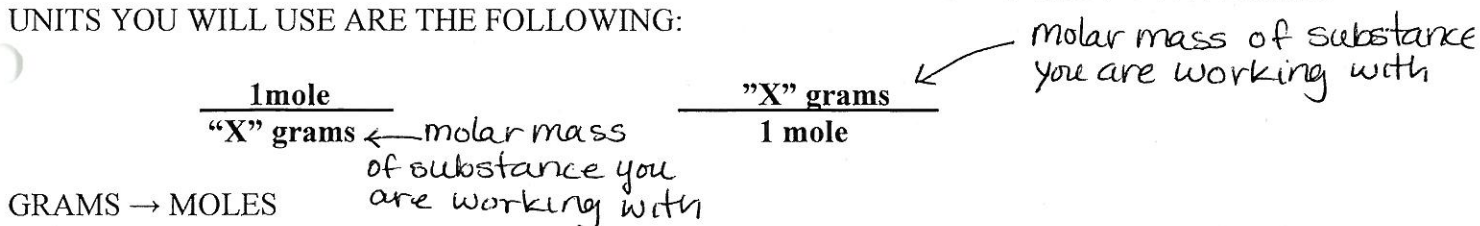
Iodous Acid



Manganese (IV) sulfide



CALCULATE THE FOLLOWING MAKE SURE TO **SHOW ALL WORK**: THE 2 CONVERSION UNITS YOU WILL USE ARE THE FOLLOWING:



A.) How many moles of carbon sulfide are in 26 g of carbon sulfide?

$$26 \text{ g CS} \left(\frac{1 \text{ mol CS}}{44.08 \text{ g CS}} \right) = \underline{0.59 \text{ mol}} \quad (\text{round to hundredth place})$$

B.) How many moles of iron (II) sulfate are in 50g of iron (II) sulfate?

$$50 \text{ g FeSO}_4 \left(\frac{1 \text{ mol}}{151.92 \text{ g}} \right) = 0.33 \text{ mol FeSO}_4$$

C.) How many moles of water are in 100 g of water?

$$100 \text{ g H}_2\text{O} \left(\frac{1 \text{ mol}}{18.02 \text{ g}} \right) = 5.55 \text{ mol H}_2\text{O}$$

D.) How many moles of copper (I) fluoride are in 200 g of copper (I) fluoride?

$$200 \text{ g CuF} \left(\frac{1 \text{ mol}}{82.55 \text{ g}} \right) = 2.42 \text{ mol CuF}$$

MOLES → GRAMS

A.) How many grams of potassium phosphate are in 0.76 moles of potassium phosphate?

$$0.76 \text{ mol K}_3\text{PO}_4 \left(\frac{212.27 \text{ g K}_3\text{PO}_4}{1 \text{ mol K}_3\text{PO}_4} \right) = \underline{161.33 \text{ g K}_3\text{PO}_4}$$

B.) How many grams of calcium hydroxide are in 2.5 moles of calcium hydroxide?

$$2.5 \text{ mol Ca(OH)}_2 \left(\frac{74.01 \text{ g}}{1 \text{ mol}} \right) = 185.25 \text{ g Ca(OH)}_2$$

C.) How many grams of pentanitrogen decoxide are in 1.75 moles of pentanitrogen decoxide?

$$1.75 \text{ mol N}_5\text{O}_{10} \left(\frac{230.05 \text{ g}}{1 \text{ mol}} \right) = 402.59 \text{ g N}_5\text{O}_{10}$$

D.) How many grams of copper (II) sulfate are in 0.6 moles of copper (II) sulfate?

$$0.6 \text{ mol CuSO}_4 \left(\frac{159.55 \text{ g}}{1 \text{ mol}} \right) = 95.73 \text{ g CuSO}_4$$