

MOLE ↔ GRAMS CALCULATIONS OF ELEMENTS AND COMPOUNDS PRACTICE #3

- 1) Convert 98.4 grams of H_2SO_4 to moles.

$$\frac{98.4 \text{ g}}{98.4 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} = \boxed{1 \text{ mol}}$$



- 2) Convert 0.21 moles of dinitrogen hexiodide to grams.

$$\frac{0.21 \text{ mol}}{1 \text{ mol}} \times \frac{789.4 \text{ g}}{1 \text{ mol}} = \boxed{165 \text{ g}}$$



$14(2) + (6)126.9 = 789.4$

- 4) How many grams are in 238 moles of arsenic?

$$\frac{238 \text{ mol}}{74.9 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} = \boxed{3.17 \text{ mol}}$$



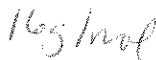
- 5) Convert 0.500 moles of CuBr to grams.

$$\frac{0.5 \text{ mol}}{1 \text{ mol}} \times \frac{143.4 \text{ g}}{1 \text{ mol}} = \boxed{71.7 \text{ g}}$$



- 6) How many moles are in 21.6 grams of CH_4 ?

$$\frac{21.6 \text{ g}}{16 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} = \boxed{1.35 \text{ mol}}$$



- 7) Convert 94.3 grams of silicon dioxide to moles.

$$\frac{94.3 \text{ g}}{60 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} = \boxed{1.57 \text{ mol}}$$



- 8) How many grams are in 9.8 moles of Nitrogen?

$$\frac{9.8 \text{ mol}}{1 \text{ mol}} \times \frac{28 \text{ g}}{1 \text{ mol}} = \boxed{274 \text{ g}}$$



- 9) How many moles are in 68 grams of copper (II) hydroxide?

$$\frac{68 \text{ g}}{97.5 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} = \boxed{0.697 \text{ mol}}$$



- 10) How many grams are in 11.9 moles of chromium?

$$\frac{11.9 \text{ mol}}{1 \text{ mol}} \times \frac{51.9 \text{ g}}{1 \text{ mol}} = \boxed{617.9 \text{ g}}$$