Warm-Up #38 Name:_____Date:_____

1. How many grams of Na_2SO_4 are in 5.01 moles of Na_2SO_4?

given = 5.01 mol Na_2SO_4 want = ? g Na_2SO_4

$$\frac{5.01 \text{ mol } Na_2SO_4 \mid 142.05 \text{ g } Na_2SO_4}{1 \text{ mol } Na_2SO_4} = 711.6705 = \boxed{712 \text{ g } Na_2SO_4}$$

2. How many liters does 3.77 moles of H_2 occupy at STP?

given = 3.77 mol H_2 want = ? liters H_2

$$\frac{3.77 \text{ mol } H_2 \mid 22.4 \text{ L } H_2}{1 \text{ mol } H_2} = 84.448 = \boxed{84.4 \text{ L } H_2}$$

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1. How many grams of Na_2SO_4 are in 5.01 moles of Na_2SO_4?

2. How many liters does 3.77 moles of H_2 occupy at STP?

3. Name/write formulas of the each acid.
   a. H_2SO_4

sulfate = ic sulfuric acid

   b. Hydrofluoric acid

hydro_ic = one element $\overset{+1}{H}\overset{-1}{F}$ HF

   c. H_3PO_4

phosphate = ic phosphoric acid

   d. H_2SO_2

$(SO_4)^{2-}$ = sulfate

$\therefore (SO_2)^{2-}$ = hyposulfite = ous

hyposulfurous acid

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   d. H_2SO_2