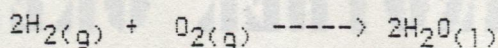


"LETS STOICH AGAIN"



1:1 ratio

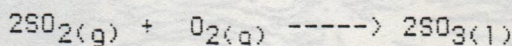
1) TO PRODUCE 0.600 MOLE OF $H_2O(l)$:

a) HOW MANY MOLES OF $H_2(g)$ ARE NEEDED?

0.600 mole

b) HOW MANY LITERS OF $O_2(g)$ ARE NEEDED?

$$\frac{1 O_2}{2 H_2} = \frac{x O_2}{0.600 \text{ mole } H_2} \quad x = 0.300 \text{ mole } O_2 \quad \frac{22.4 L}{1 \text{ mole}} = \frac{x L}{0.300 \text{ mole}} = 6.72 L$$

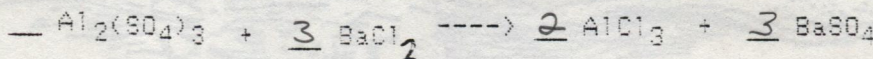


2) HOW MANY MOLES OF $SO_3(l)$ WILL BE FORMED REACTING WITH 2.1973×10^{20} MOLECULES OF $O_2(g)$?

$$\frac{1 \text{ mole } O_2}{6.02 \times 10^{23}} = \frac{x \text{ mole } O_2}{2.1973 \times 10^{20}} \quad x = 3.65 \times 10^{-4} \text{ mole } O_2$$

$$\frac{2 SO_3}{1 O_2} = \frac{x SO_3}{3.65 \times 10^{-4}}$$

$x = 7.30 \times 10^{-4} \text{ mole } SO_3$



needed to produce

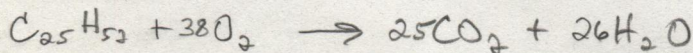
3) HOW MANY GRAMS OF BARIUM CHLORIDE WILL BE PRODUCED FROM 188 GRAMS OF ALUMINUM SULFATE?

$$\frac{188 \text{ g } Al_2(SO_4)_3}{342.14 \text{ g/mole}} = 0.5495 \text{ mole } Al_2(SO_4)_3$$

$$\frac{3 BaCl_2}{1 Al_2(SO_4)_3} = \frac{x BaCl_2}{0.5495} \quad x = 1.648 \text{ mole } BaCl_2$$

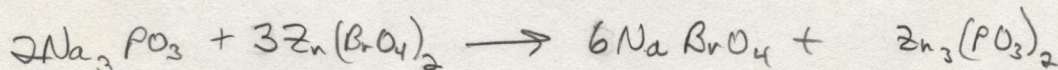
$$1.648 = \frac{x \text{ g}}{208.24 \text{ g/mole}} \quad x = 343 \text{ g}$$

4) IF 78 LITERS OF OXYGEN ARE CONSUMED WHEN A CANDLE (PARAFFIN $C_{25}H_{52}$) IS BURNED, WHAT VOLUME OF CARBON DIOXIDE IS PRODUCED?



$$\frac{25 CO_2}{38 O_2} = \frac{x CO_2}{78 O_2} \quad x = 51.1 L CO_2$$

5) WHEN 4 MOLES OF SODIUM PHOSPHITE REACTS WITH 4 MOLES OF ZINC PERBROMATE, HOW MANY MOLES OF SODIUM PERBROMATE ARE PRODUCED?



$Zn(BrO_4)_2$ is limiting

$$\frac{6 NaBrO_4}{3 Zn(BrO_4)_2} = \frac{x \text{ mole}}{4 \text{ mole}}$$

$x = 8 \text{ mole } NaBrO_4$