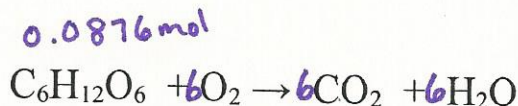


PSC-4012 Quiz # 9

Name: *Answers*

Date:

1. How many moles of oxygen are required to react with 30 grams of glucose,  $C_6H_{12}O_6$ ?



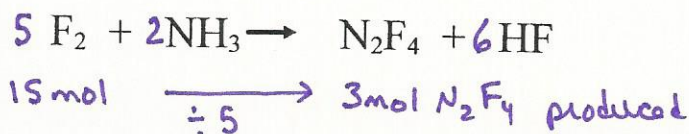
$$30g C_6H_{12}O_6 \times \frac{1 \text{ mol}}{342.34g} = 0.0876 \text{ mol } C_6H_{12}O_6$$

$$\text{mol } O_2 :$$

$$0.0876 \text{ mol} \times 6$$

$$= \boxed{0.53 \text{ mol } O_2}$$

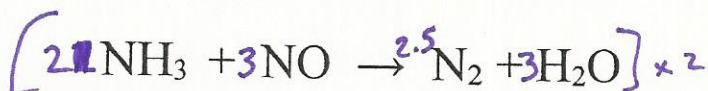
2. If 15 moles of fluorine gas react then what mass of dinitrogen tetrafluoride will be produced?



$$3 \text{ mol } N_2F_4 \times \frac{104.02g}{1 \text{ mol}}$$

$$= \boxed{312.06g N_2F_4}$$

Bonus: How many grams of water are produced if 3mol of ammonia (nitrogen trihydride) are used?



$$3 \text{ mol} \xrightarrow{\times 1.5} 4.5 \text{ mol } H_2O \text{ produced}$$

$$4.5 \text{ mol } H_2O \times \frac{18.02g}{1 \text{ mol}} = \boxed{81.09g H_2O}$$