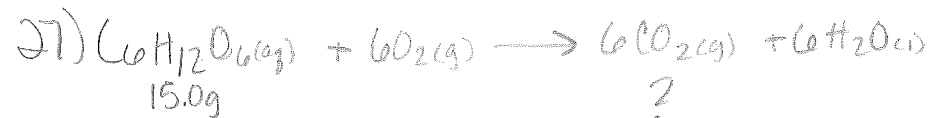
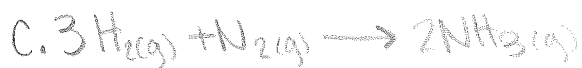


# Chapter 8 Key 8.1

22)a. The reactants are  $C_4H_{10}$  and  $O_2$ . The products are  $CO_2$  and  $H_2O$ . The coefficient for  $C_4H_{10}$  is 2; The coefficient for  $O_2$  is 13; the coefficient for  $CO_2$  is 8; the coefficient for  $H_2O$  is 10. All the reactants and products are in the gaseous state.

23) conservation of matter.



$$15.0g C_6H_{12}O_6 \times \frac{1 \text{ mol } C_6H_{12}O_6}{180.2g C_6H_{12}O_6} \times \frac{6 \text{ mol } CO_2}{1 \text{ mol } C_6H_{12}O_6} \times \frac{44.01g CO_2}{1 \text{ mol } CO_2} = 22.0g CO_2$$



$$10.5g CuO \times \frac{1 \text{ mol } CuO}{79.55g CuO} \times \frac{3 \text{ mol } Cu}{3 \text{ mol } CuO} \times \frac{63.55g Cu}{1 \text{ mol } Cu} = 8.39g Cu$$