Name:_____ Date:_____ Block:_____

Stoichiometry Conversions Practice

*Directions:* Answer the questions below using the stoichiometry road map. You MUST SHOW ALL WORK.

$$1\ C_3H_8 + 5\ O_2 \rightarrow 3\ CO_2 + 4\ H_2O$$

1. How many moles of $CO_2$ are produced from 3.2 moles of $C_3H_8$?

2. How many liters of $CO_2$ can be produced from 13.4 liters of oxygen gas?

3. If I have 34.6 grams of $H_2O$, how many grams of $O_2$ did I use?

$$3\ H_2SO_4 + 2\ Fe \rightarrow 1\ Fe_2(SO_4)_3 + 3\ H_2$$

4. How many moles of $H_2$ are made from 6.6 moles of $H_2SO_4$?

5. If given 95 grams of Fe, how many moles of $Fe_2(SO_4)_3$ are produced?

6. How many grams of $H_2$are produced from 227 grams of $H_2SO_4$?

$$1\ Li_3N + 3\ H_2O \rightarrow 1\ NH_3 + 3\ LiOH$$

7. Determine the mass in grams of LiOH produced when 0.94 grams of $Li_3N$ reacts in the equation above.

8. How many liters of water are needed to produce with 7.39 moles of $NH_3$?

9. How many moles of $Li_3N$ are needed to produce 63.8 grams of $NH_3$?

$$1\ Sb_2O_3 + 3\ C \rightarrow 2\ Sb + 3\ CO$$

10. How many moles of carbon are needed to produce 13.9 moles of antimony?

11. If I have 50 grams of carbon then how many grams of $Sb_2O_3$ are needed to react?

12. Determine the moles of CO produced when 1.4 grams of $Sb_2O_3$ are present.

$$6\ Li + 1\ N_2 \rightarrow 2\ Li_3N$$

13. How many grams of nitrogen gas ($N_2$) are needed to completely react with 67.3 g Li?

14. If I have 3.4 moles of $Li_3N$ then how many moles of lithium did I use?

15. How many grams of $Li_3N$ are produced from 6.8 moles of nitrogen gas ($N_2$)?