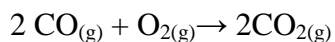


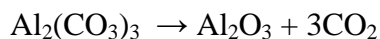
Stoichiometry Review Problems

Name _____

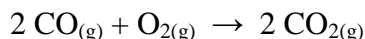
1. In the formation of carbon dioxide from carbon monoxide and oxygen, how many moles of carbon monoxide are needed to react completely with 7.0 moles of oxygen gas?



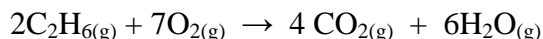
2. How many moles of carbon dioxide can be formed by the decomposition of 5 moles of aluminum carbonate?



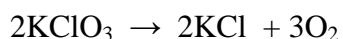
3. In the formation of carbon dioxide from carbon monoxide and oxygen, how many liters of carbon monoxide are needed to react completely with 0.5 mole of oxygen gas at STP?



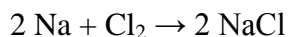
4. How many moles of oxygen are required to burn 22.4 L of ethane (C_2H_6) at STP?



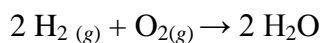
5. How many grams of oxygen are produced by the decomposition of 1 mole of potassium chlorate?



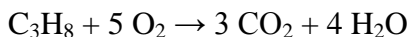
6. A chemist performs the synthesis of sodium chloride from its elements. The chemist begins with 46 grams of sodium. How many moles of chlorine are needed?



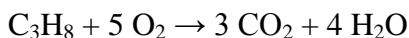
7. How many grams of water can be prepared from 5 moles of hydrogen at standard conditions?



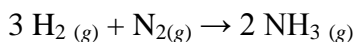
8. Suppose that an excess of propane, C_3H_8 burns in 320 g of O_2 . How many moles of H_2O will be formed?



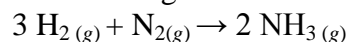
9. At standard conditions, how many liters of carbon dioxide, CO_2 , will be formed by the combustion of 1/2 mole of propane, C_3H_8 ?



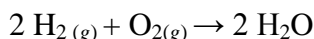
10. Ammonia, NH_3 , is commercially prepared by the Haber process. How many moles of ammonia can be formed from 44.8 liters of nitrogen gas and an excess of hydrogen at standard conditions?



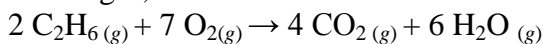
11. How many liters of hydrogen, H_2 , are needed to react with 10 liters of nitrogen gas in the reaction forming ammonia?



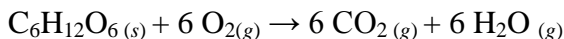
12. How many grams of water can be prepared from 8 grams of hydrogen at standard conditions?



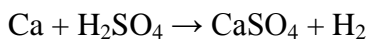
13. How many grams of carbon dioxide are produced by the combustion of 22.4 liters of ethane gas, C_2H_6 at standard conditions?



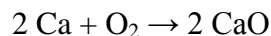
14. How many liters of oxygen, at standard conditions, are required to react with 30 grams of glucose, $C_6H_{12}O_6$?



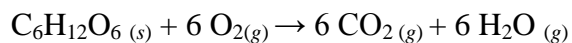
15. How many grams of calcium must react with of sulfuric acid, H_2SO_4 , in order to produce 5.6 liters of hydrogen gas?



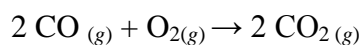
16. How many grams of calcium will react with 44.8 liters of oxygen gas at standard conditions?



17. A certain amount of glucose, $C_6H_{12}O_6$ burned in oxygen, and produced 22 grams of carbon dioxide, CO_2 . How many grams of water were produced at the same time?



18. How many liters of oxygen are required to react completely with 22.4 liters of carbon monoxide, CO , at standard conditions?



Stoichiometry Review Worksheet Answers

1. 14moles
2. 15 moles
3. 22.4 L
4. 3.5 moles
5. 48 grams
6. 1 mole
7. 90 grams
8. 8 moles
9. 33.6 L
10. 4 moles
11. 30 Liters
12. 72 grams
13. 88 grams
14. 22.4 L
15. 10 grams
16. 160 grams
17. 9 grams
18. 11.2 L