

Name: _____

Period: _____

Seat#: _____

Directions:

- For all these problems, assume that the reactions are being performed at a pressure of 1.0 atm and a temperature of 25°C.
- Don't forget! You must show all work and units for conversions, gas laws, dimensional analysis, etc.
- Get an actual answer, including units! Box your answer!
- Some answers are provided at the end of the question. The answers are underlined.

- 1) Calcium carbonate decomposes at high temperatures to form carbon dioxide and calcium oxide. How many grams of calcium carbonate will I need to form 3.45 liters of carbon dioxide? 14.1 grams



- 2) Ethylene burns in oxygen to form carbon dioxide and water vapor. How many liters of water can be formed if 1.25 liters of ethylene are consumed in this reaction? 2.50 liters



- 3) When chlorine is added to acetylene, 1,1,2,2-tetrachloroethane is formed. How many liters of chlorine will be needed to make 75.0 grams of $\text{C}_2\text{H}_2\text{Cl}_4$? 21.87 L



