

Stoich Probs

Name: \_\_\_\_\_

1. A mass of 50.0 g of potassium chlorate is decomposed by heating. (a) How many moles of potassium chlorate are decomposed? (b) How many moles of oxygen are prepared? (c) What is the mass of oxygen prepared?
  
2. A mass of 130 g of zinc was added to a solution containing 100.0 g of HCl. After the reaction ceased, 41 g of zinc remained. How many moles of hydrogen were produced?
  
3. Calcium oxide can be derived by decomposing calcium carbonate. How many liters of carbon dioxide will be liberated when 1500.0 g of CaO have been produced? The density of carbon dioxide is 1.997 g/L.
  
4. An excess amount of magnesium metal is placed in 200.0 <sup>grams</sup> of sulfuric acid. (a) How many moles of hydrogen gas are produced? (b) How many atoms of hydrogen are produced? (c) How many liters of hydrogen gas are produced?
  
5. Sodium chlorate is heated and decomposed to form sodium chloride and oxygen gas. How many grams of sodium chlorate is needed to produce 100.0 liters of oxygen?
  
6. How many liters of oxygen evolve from the decomposition of 850.0 g of potassium chlorate? The density of O<sub>2</sub> is 1.429 g/L. Solve this problem two different ways! Do your answers check?