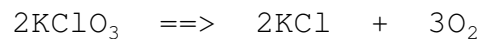


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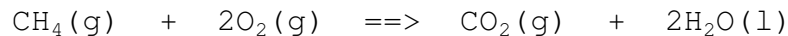
### Stoichiometry Quiz

1. What mass of oxygen is produced in the thermal decomposition of 5.0 g of potassium chlorate?



$$5.0 \text{ g KClO}_3 \times \frac{1 \text{ mol KClO}_3}{122.55 \text{ g KClO}_3} \times \frac{3 \text{ mol O}_2}{2 \text{ mol KClO}_3} \times \frac{32.00 \text{ g O}_2}{1 \text{ mol O}_2} = 1.96 \text{ g O}_2$$

2. What mass of O<sub>2</sub> is needed to react with 6.4 g of methane according to the following equation? What mass of carbon dioxide forms?



$$6.4 \text{ g CH}_4 \times \frac{1 \text{ mol CH}_4}{16.05 \text{ g CH}_4} \times \frac{2 \text{ mol O}_2}{1 \text{ mol CH}_4} \times \frac{32.00 \text{ g O}_2}{1 \text{ mol O}_2} = 25.52 \text{ g O}_2$$

$$6.4 \text{ g CH}_4 \times \frac{1 \text{ mol CH}_4}{16.05 \text{ g CH}_4} \times \frac{1 \text{ mol CO}_2}{1 \text{ mol CH}_4} \times \frac{44.01 \text{ g CO}_2}{1 \text{ mol CO}_2} = 17.55 \text{ g CO}_2$$