

## Stoichiometry Practice

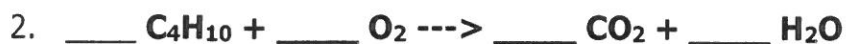
Show all work in your notebook, including dimensional analysis and units!



a) How many moles of iron would be needed to react with 3.82 moles of oxygen?

b) How many molecules of iron (III) oxide can be produced from 13.5 moles Fe?

c) How many moles of  $\text{O}_2$  are needed to produce 34.7 g of  $\text{Fe}_2\text{O}_3$ ?



a) When 0.624 moles of  $\text{O}_2$  are reacted, how many moles of carbon dioxide are produced?

b) How many grams of  $\text{C}_4\text{H}_{10}$  are needed to produce 3.7 moles of water?

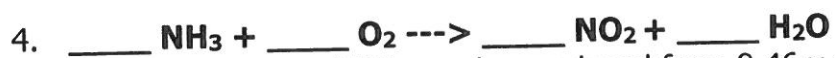
c) What volume of  $\text{O}_2$  gas is needed to react with 2.56 g of  $\text{C}_4\text{H}_{10}$ ?



a) When 62.0 g of potassium chlorate are reacted, how many moles of KCl will be formed?

b) How many molecules of  $\text{O}_2$  are produced from 2.85 g of  $\text{KClO}_3$ ?

c) 3.54 g of oxygen was produced. How many grams of potassium chlorate were used?



a) What mass of  $\text{NO}_2$  can be produced from  $8.46 \times 10^{22}$  molecules of oxygen?

b) 23.7 g of  $\text{NH}_3$  would be able to produce how many moles of  $\text{H}_2\text{O}$ ?

c) How many grams of  $\text{O}_2$  are needed to produce  $1.26 \times 10^{28}$  molecules of  $\text{H}_2\text{O}$ ?

d) How many moles of  $\text{NH}_3$  are needed to react completely with 22.05 L of oxygen?