

Name:
Stoichiometry



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



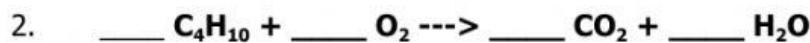
b) What **mass** of iron (III) oxide can be produced from 13.5 **moles** Fe?



c) How many **moles** of O_2 are needed to produce 34.7 **g** of Fe_2O_3 ?



d) What **mass** of iron (III) oxide can be produced from 135 **g** Fe?



a) When 0.624 **moles** of O_2 are reacted, how many **moles** of carbon dioxide are produced?

0.624 mol O_2 88 g H_2O

10 H_2O 58.14 g

13 O_2 44.01 g

2 C_4H_{10} 32.00 g

8 CO_2 18.02 g

1 mole 6.022×10^{23}

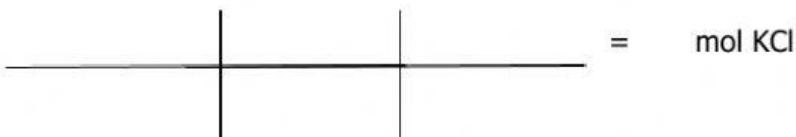
1 mole

b) How many **grams** of C_4H_{10} would produce 88 **grams** of water?





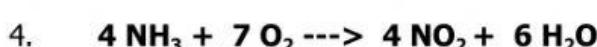
a) When 62.0 **g** of Potassium chlorate decomposes, how many **moles** of KCl will be formed?



b) How many **grams** of O_2 are produced from the decomposition of 2.85 **moles** of $KClO_3$?



c) If 3.54 g of oxygen was produced. What **mass** of potassium chlorate was used?



$$4 \text{ NH}_3 + 7 \text{ O}_2$$

$$4 \text{ NH}_3 + 7 \text{ O}_2$$

$$4 \text{NO}_2 + 6 \text{H}_2\text{O} \rightarrow \dots$$

8.46×10^{22} molecules O₂

6.022×10^{23} molecules

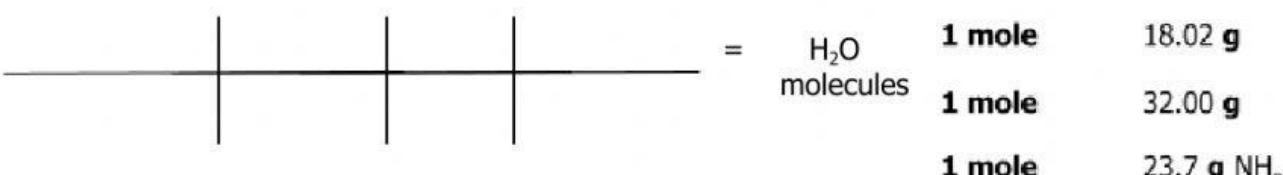
1 mole 17.04 g

b) 23.7 g of NH_3 could produce how many **molecules** of H_2O ?

16.21



1 - 100 - 10.62 -



c) How many **moles** of NH_3 are needed to react completely with 9.5 **g** of oxygen?

9.5 g O₂

