

Name:  
Stoichiometry



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

$\underline{\hspace{2cm}} = \text{mol Fe}$

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

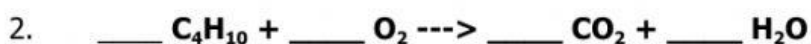
$\underline{\hspace{2cm}} = \text{g Fe}_2\text{O}_3$

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

$\underline{\hspace{2cm}} = \text{mol O}_2$

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

$\underline{\hspace{2cm}} = \text{g Fe}_2\text{O}_3$



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

$\underline{\hspace{2cm}} = \text{mol CO}_2$

b) How many **grams** of  $\text{C}_4\text{H}_{10}$  would produce 88 **grams** of water?

$\underline{\hspace{2cm}} = \text{g C}_4\text{H}_{10}$

0.624 mol $\text{O}_2$	88 g $\text{H}_2\text{O}$
10 $\text{H}_2\text{O}$	58.14 g
13 $\text{O}_2$	44.01 g
2 $\text{C}_4\text{H}_{10}$	32.00 g
8 $\text{CO}_2$	18.02 g
1 mole	6.022E23
1 mole	



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

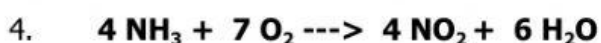
			=	mol KCl
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b) How many **grams** of O<sub>2</sub> are produced from the decomposition of 2.85 **moles** of KClO<sub>3</sub>?

			=	g O <sub>2</sub>
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c) If 3.54 g of oxygen was produced. What **mass** of potassium chlorate was used?

				=	g KClO <sub>3</sub>
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a) What **mass** of NO<sub>2</sub> can be produced from  $8.46 \times 10^{22}$  **molecules** of oxygen?

				=	g NO <sub>2</sub>
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b) 23.7 g of NH<sub>3</sub> could produce how many **molecules** of H<sub>2</sub>O?

				=	H <sub>2</sub> O molecules
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c) How many **moles** of NH<sub>3</sub> are needed to react completely with 9.5 g of oxygen?

			=	mol NH <sub>3</sub>
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4 NH <sub>3</sub>	7 O <sub>2</sub>
4 NH <sub>3</sub>	7 O <sub>2</sub>
4 NO <sub>2</sub>	6 H <sub>2</sub> O
8.46 x 10 <sup>22</sup> molecules O <sub>2</sub>	
6.022 x 10 <sup>23</sup> molecules	
1 mole	17.04 g
1 mole	46.01 g
1 mole	18.02 g
1 mole	32.00 g
1 mole	23.7 g NH <sub>3</sub>
	9.5 g O <sub>2</sub>