

⑤ $H_2SO_4 + 2NaOH \rightarrow Na_2SO_4 + 2H_2O$

Neutralization ACID BASE SALT Water

2g 2g ? Molecules

2g Na₂SO₄	1 mol Na₂SO₄	2 mole H₂O	6.02 x 10²³ molecules H₂O
	1/2 g H₂SO₄	1 mole Na ₂ SO ₄	1 mole H ₂ O

1.7 x 10²² Molecules H₂O

Jan 14-8:34 AM

② $2KClO_3 \rightarrow 2KCl + 3O_2(g)$

5g 22g 22.4L O₂

5g KClO₃	1 mole KClO₃	3 mole O₂	22.4L O₂
	22g KClO ₃	2 mole KClO ₃	1 mole O ₂ =

Jan 14-9:03 AM

LR $\text{H}_2\text{SO}_4 + 2\text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$

H_2SO_4 3g $\xrightarrow{\text{5 needed}}$ Na_2SO_4 1.1g

3g $\xrightarrow{\text{How much left over}}$

LR $\frac{3\text{g H}_2\text{SO}_4}{98\text{g H}_2\text{SO}_4} \times \frac{2\text{mole H}_2\text{O}}{1\text{mole H}_2\text{SO}_4} \times \frac{18\text{g H}_2\text{O}}{1\text{mole H}_2\text{O}} = 1.1\text{g H}_2\text{O}$

$\frac{3\text{g NaOH}}{40\text{g NaOH}} \times \frac{2\text{mole H}_2\text{O}}{2\text{mole NaOH}} \times \frac{18\text{g H}_2\text{O}}{1\text{mole H}_2\text{O}} = 1.35\text{g H}_2\text{O}$

LR How much of non-LR reactant is left over?

$\frac{3\text{g H}_2\text{SO}_4}{98\text{g H}_2\text{SO}_4} \times \frac{2\text{mole NaOH}}{1\text{mole H}_2\text{SO}_4} \times \frac{40\text{g NaOH}}{1\text{mole NaOH}} = 2.45\text{g NaOH}$ is used

HAVE 3g - Used 2.45g = Left over 0.55g NaOH

Jan 14-9:06 AM

1 Frames + 4 Tires \rightarrow 1 Cars

20 \rightarrow ?

$\frac{20\text{ Frames}}{1\text{ Frame}} \times \frac{1\text{ car}}{4\text{ tires}} = 20\text{ cars}$

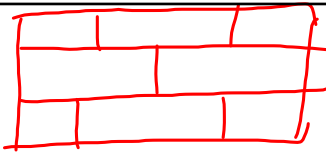
$\frac{20\text{ tires}}{4\text{ tires}} \times \frac{1\text{ car}}{1\text{ frame}} = 5\text{ cars}$ LR


How many frames are left over?

$\frac{20\text{ Tires}}{4\text{ tires}} \times \frac{1\text{ frame}}{1\text{ frame}} = 5\text{ frames}$ Used

HAVE 20 frames - Used 5 frames = Left over 15 frames Non-LR

Jan 14-9:31 AM

Sochan  BRICK HOWZ

Tobias - OUR HERO 

Jan 14-9:37 AM

LR $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
 250 kg 148 kg —→

250 000 g Fe_2O_3	1 mole Fe_2O_3	2 mole Fe	56 g Fe	= 175 000 g Fe
	160 g Fe_2O_3	1 mole Fe_2O_3	1 mole Fe	

148 000 g CO	1 mole CO	2 mole Fe	56 g Fe	= 197 333.33 g Fe
	28 g CO	3 mole CO	1 mole Fe	

250 000 g Fe_2O_3	1 mole Fe_2O_3	3 mole CO	28 g CO	= 131 250 g CO USED
	160 g Fe_2O_3	1 mole Fe_2O_3	1 mole CO	

148 000 g CO Start - 131 250 g USE = 16 750 g CO left over

Jan 14-9:53 AM