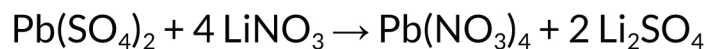


CHEMICAL EQUATIONS

AND

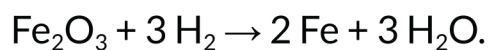
STOICHIOMETRY WORKSHEET

1. Using the following equation:



How much (in grams) lithium nitrate will be needed to make 250 grams of lithium sulfate, assuming you have enough lead (IV) sulfate to react?

2. Using the following equation:



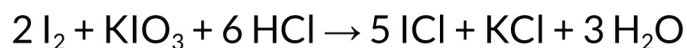
Calculate how many grams of iron can be made from 16.5 grams of Fe_2O_3 .

3. Using the following equation:



How many moles and grams of KMnO_4 are needed for this reaction on 11.4 grams of KNO_2 ?

4. Using the following equation:

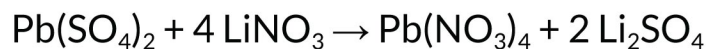


Calculate how many grams of iodine are needed to prepare 28.6 grams of ICl by this reaction.

CHEMICAL EQUATIONS AND STOICHIOMETRY WORKSHEET

Answers

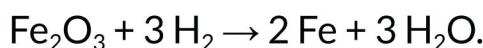
1. Using the following equation:



How much (in grams) lithium nitrate will be needed to make 250 grams of lithium sulfate, assuming you have enough lead (IV) sulfate to react?

$$250 \text{ g Li}_2\text{SO}_4 \times (1 \text{ mol Li}_2\text{SO}_4 / 110 \text{ g Li}_2\text{SO}_4) \times (4 \text{ mol LiNO}_3 / 2 \text{ mol Li}_2\text{SO}_4) \\ \times (69 \text{ g LiNO}_3 / 1 \text{ mol LiNO}_3) = 313.6 \text{ g LiNO}_3$$

2. Using the following equation:



Calculate how many grams of iron can be made from 16.5 grams of Fe_2O_3 .

$$16.5 \text{ g Fe}_2\text{O}_3 \times (1 \text{ mol Fe}_2\text{O}_3 / 159.7 \text{ g Fe}_2\text{O}_3) \times (2 \text{ mol Fe} / 1 \text{ mol Fe}_2\text{O}_3) \\ \times (55.8 \text{ g Fe} / 1 \text{ mol Fe}) = 11.5 \text{ g Fe}$$

3. Using the following equation:

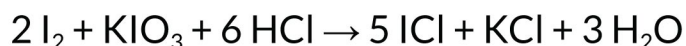


How many moles and grams of KMnO_4 are needed for this reaction on 11.4 grams of KNO_2 ?

$$11.4 \text{ g KNO}_2 \times (1 \text{ mol KNO}_2 / 85.1 \text{ g KNO}_2) \times (2 \text{ mol KMnO}_4 / 5 \text{ mol KNO}_2) = \\ 0.054 \text{ mol KMnO}_4$$

$$0.054 \text{ mol KMnO}_4 \times (158 \text{ g KMnO}_4 / 1 \text{ mol KMnO}_4) = 8.46 \text{ g KMnO}_4$$

4. Using the following equation:



Calculate how many grams of iodine are needed to prepare 28.6 grams of ICl by this reaction.

$$28.6 \text{ g ICl} \times (1 \text{ mol ICl} / 162.35 \text{ g ICl}) \times (2 \text{ mol I}_2 / 5 \text{ mol ICl}) \times (253.8 \text{ g I}_2 / 1 \text{ mol I}_2) = \\ 17.88 \text{ g I}_2$$