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1. How many grams of sodium hydroxide will be produced if 3.22g of sodium are placed in 2.70g of water?
   HINT : Na is the limiting factor, why?

2. How many grams of calcium hydroxide are produced when 11.0g calcium oxide are put into 3.42g water?

3. How many grams of magnesium chloride are produced if 2.50g magnesium reacts with dilute hydrochloric acid (7.25g acid)?

4. How many grams of water are formed in the reaction when 20.0g calcium hydroxide are mixed with 19.6g phosphoric acid?

5. A 4.50 g sample of butane (C_4H_{10}) is burned in the presence of oxygen gas, which had a volume of 10.5 L at STP. How many grams of water will be produced from this reaction?

Answers:

1. 5.60 g NaOH   2. H_2O is 14.1 g $Ca(OH)_2$ 3. 9.47 g $MgCl_2$ 4. 9.72 g H_2O 5. 6.50 g H_2O