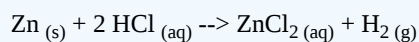# 1.8.9.1: Practice Gas Stoichiometry

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Exercise 1.8.9.1.1

If you reacted 14.7 g of Zn in the following reaction, what volume of H_2 gas, measured at STP, would be produced?

$Zn_{(s)} + 2\ HCl_{(aq)} \rightarrow ZnCl_{2\ (aq)} + H_{2\ (g)}$

Answer

    5.04 L. (0.225 moles)

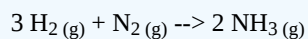**Exercise 1.8.9.1.1**

What mass of O_2 gas is contained in a 3.85 L container at STP?.

Answer

    5.50 g. (0.172 moles)

Exercise 1.8.9.1.1

How many liters of H_2 gas, measured at STP, is needed to produce 85.0 g of NH_3?

$3\ H_{2\ (g)} + N_{2\ (g)} \rightarrow 2\ NH_{3\ (g)}$

Answer

    168 L. (7.48 moles)