

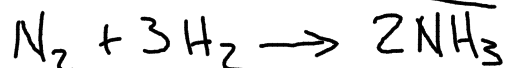
Ch 12

HW: Rev Con 43,44,49,50,76,77

Sec 12.2

obj: From balanced chemical equations perform stoichiometric calculations that involve particles and volume.

Mole \rightarrow Volume Calculation



What Volume of H_2 is needed to produce 3.6 mols of NH_3 (STP)

Given

3.6 mol NH_3

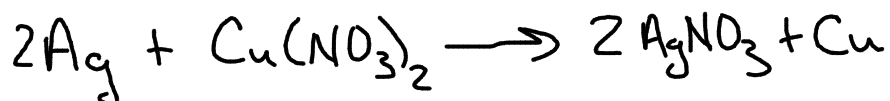
Wanted

L of H_2

3.6 mol NH_3	3 mol H_2	22.4 L H_2
	2 mol NH_3	1 mol H_2

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Mass - Particle Calculation



How many atoms of Cu are produced from 20.0 g of Ag?

Given

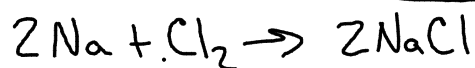
20.0 g Ag

Wanted

Atoms Cu

20.0 g Ag	1 mol Ag	1 mol Cu	6.02×10^{23}
	108 g Ag	2 mol Ag	1 mol Cu

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Volume-Particle Calculation

How many formula Units of NaCl are produced from 49L of Cl_2 ? (STP)

Given

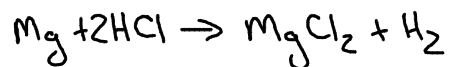
49L of Cl_2

Wanted

For.U. NaCl

$$\frac{49\text{L Cl}_2}{22.4\text{L Cl}_2} \times \frac{1\text{mol Cl}_2}{1\text{mol Cl}_2} \times \frac{2\text{mol NaCl}}{1\text{mol Cl}_2} \times \frac{6.02 \times 10^{23} \text{ For.U. of NaCl}}{1\text{mol NaCl}}$$

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Particle-Mass Calculation

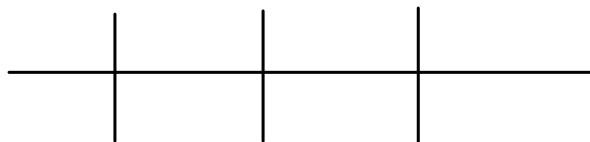
What mass of HCl is needed to react w/ 7.2×10^{23} atoms of Mg?

Given

7.2×10^{23} atoms Mg

Wanted

mass HCl



Dec 15 - 11:53 AM