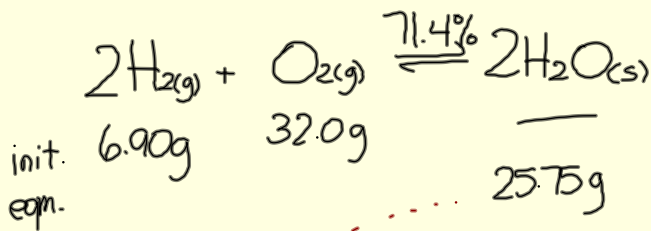


## SAMPLE PROBLEM : % REACTION

Find the % reaction and write the expression if 6.90 g of  $\text{H}_2(\text{g})$  and 32.0 g of  $\text{O}_2(\text{g})$  react to form 25.75 g of ice at  $-70^\circ\text{C}$ .



$$\% \text{rxn} = \frac{\text{exp.}}{\text{theor.}} \times 100\%$$

Find max. product

If  $\text{H}_2$  is L.R.:

$$6.90\text{g H}_2 \times \frac{1\text{ mol H}_2}{2.02\text{g H}_2} \times \frac{2\text{ mol H}_2\text{O}}{2\text{ mol H}_2} \times \frac{18.02\text{g H}_2\text{O}}{1\text{ mol H}_2\text{O}} = 61.55\text{g H}_2\text{O}$$

If  $\text{O}_2$  is L.R.

$$32.0\text{g O}_2 \times \frac{1\text{ mol O}_2}{32.00\text{g O}_2} \times \frac{2\text{ mol H}_2\text{O}}{1\text{ mol O}_2} \times \frac{18.02\text{g H}_2\text{O}}{1\text{ mol H}_2\text{O}} = 36.04\text{g H}_2\text{O}$$

$\therefore \text{O}_2$  is L.R.

$$\% \text{rxn} = \frac{\text{exp.}}{\text{theor.}} \times 100\%$$

$$\% \text{rxn} = \frac{25.75\text{g}}{36.04\text{g}} \times 100\%$$

$$\% \text{rxn} = 71.4\%$$

# Percent Reaction Worksheet