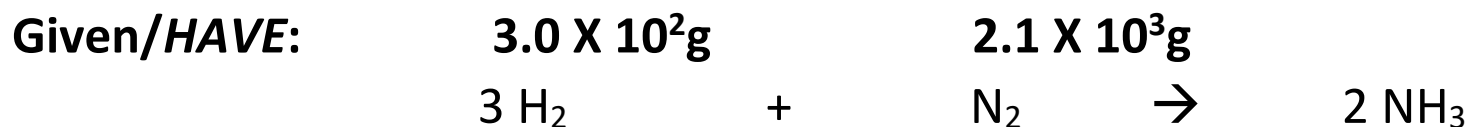


Limiting Legos Calculations – ANSWER KEY



NEED:

$$1. (\cancel{3.0 \times 10^2 \text{g H}_2}) (\underline{1 \text{ mol H}_2}) = 150 \text{ mol H}_2$$
$$(\cancel{2 \text{ g H}_2})$$

$$(\cancel{2.1 \times 10^3 \text{g N}_2}) (\underline{1 \text{ mol N}_2}) = 75 \text{ mol N}_2$$
$$(\cancel{28 \text{ g N}_2})$$

$$2. (\cancel{150 \text{ mol H}_2}) (\underline{1 \text{ mol N}_2}) = 50 \text{ mol N}_2$$
$$(\cancel{3 \text{ mol H}_2})$$

Since $75 \text{ mol} > 50 \text{ mol} \rightarrow \text{N}_2$ is the EXCESS Reactant

HAVE > *NEED* & $\therefore \text{H}_2$ is the Limiting Reactant

$$(\cancel{150 \text{ mol H}_2}) (\underline{2 \text{ mol NH}_3}) (\underline{17 \text{ g NH}_3}) = \underline{1700 \text{g NH}_3}$$
$$(\cancel{3 \text{ mol H}_2}) (\cancel{1 \text{ mol NH}_3})$$