

Ammonia, NH_3 , is a clear, colorless gas with a pungent smell produced by the reaction of hydrogen gas, H_2 and nitrogen gas, N_2 . Which of the following chemical equations best represent this reaction?

Select one:

- a. $\text{H (g) + N (g) } \rightarrow \text{NH (g)}$
- b. $3\text{H (g) + N (g) } \rightarrow 2\text{NH (g)}$
- c. $3\text{H (g) + 3N (g) } \rightarrow 2\text{NH (g)}$
- d. $\text{H (g) + N (g) } \rightarrow \text{N}_2\text{H (g)}$

Solution:

$3\text{H}_2 + \text{N}_2 = 2\text{NH}_3$ It is the reaction of ammonia synthesis.

Answer: b. $3\text{H (g) + N (g) } \rightarrow 2\text{NH (g)}$.

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