

Stoichiometry Practice, Part I

- The balanced equation $\text{P}_4(s) + 6\text{H}_2(g) \rightarrow 4\text{PH}_3(g)$ tells us that 2 mol H_2
[A] produces 4 mol PH_3 [B] produces 2 mol PH_3 [C] reacts with 2 mol P_4
[D] reacts with 1 mol P_4 [E] cannot react with phosphorus
- The equation $\text{N}_2(g) + 3\text{H}_2(g) \rightarrow 2\text{NH}_3(g)$ can be interpreted by saying that 1 mol of N_2 reacts with 3 mol of H_2 to form 2 mol of NH_3 .
[A] True [B] False
- The balanced equation $2\text{Cu}(s) + \text{O}_2(g) \rightarrow 2\text{CuO}(s)$ tells us that 1 mol of Cu
[A] produces 1 mol of CuO [B] must react with 32 g of O_2
[C] cannot react with oxygen [D] reacts with 1 mol of O_2
[E] produces 2 mol of CuO
- An excess of Al and 6.0 mol of Br_2 are reacted according to the equation
 $2\text{Al} + 3\text{Br}_2 \rightarrow 2\text{AlBr}_3$
How many moles of AlBr_3 will be formed assuming 100% yield?
[A] 8.0 mol [B] 2.0 mol [C] 4.0 mol [D] 6.0 mol [E] 3.0 mol
- The rusting of iron is represented by the equation $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$. If you have a 1.50-mol sample of iron, how many moles of Fe_2O_3 will there be after the iron has rusted completely?
[A] 2.0 mol [B] 0.50 mol [C] 0.75 mol [D] 1.50 mol [E] 1.0 mol
- For the reaction
 $\text{C}_2\text{H}_4(g) + 3\text{O}_2(g) \rightarrow 2\text{CO}_2(g) + 2\text{H}_2\text{O}(g)$
if 6.0 mol of CO_2 are produced, how many moles of O_2 were reacted?
[A] 15.0 mol [B] 9.0 mol [C] 7.5 mol [D] 4.0 mol [E] none of these
- A 3.0-mol sample of KClO_3 was decomposed according to the equation
 $2\text{KClO}_3(s) \rightarrow 2\text{KCl}(s) + 3\text{O}_2(g)$
How many moles of O_2 are formed assuming 100% yield?
[A] 3.0 mol [B] 4.0 mol [C] 2.0 mol [D] 2.5 mol [E] 4.5 mol

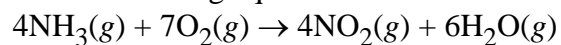
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8. The equation for a reaction should be balanced before doing stoichiometric calculations.

[A] True

[B] False

9. Refer to the following equation:



How many moles of ammonia will be required to produce 10.0 mol of water?

[A] 6.67 mol

[B] 4.00 mol

[C] 5.00 mol

[D] 10.0 mol

[E] none of these