

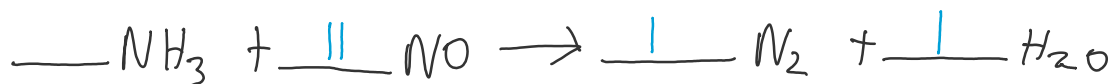
How to Balance Equation



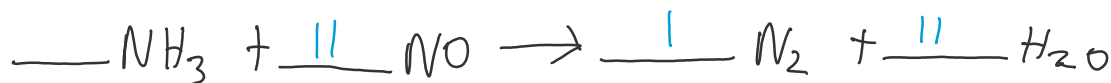
I will first try to fix the amount of NO and H₂O needed
 Since these molecules are the only ones that use O (using tally marks)



but since N₂ on the products needs at least 2 N atoms:



but since there are 2 O atoms in NO, we need 2 H₂O molecules to have 2 O atoms on the products



notice that on the products, NH₃ only gives H atoms in threes.

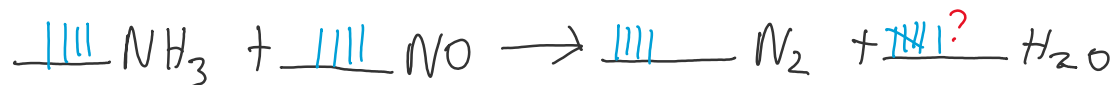
So, the number of H atoms on the reactants must be divisible by 3. ∴ 2 NH₃ and 3

Also, on the products, N atoms are only accepted in groups of 2.

So, we need to feed in even number of N atoms in reactants



we need 3 O atoms in order to have 3 H₂O but we also need even # of N a
 so:



not enough O!

so:



$$\text{N}: 4 + 6 = 10 \checkmark$$

$$\text{H}: 4(3) = 12 \checkmark$$

$$\text{N}: 5(2) = 10 \checkmark$$

$$\text{H}: 6(2) = 12 \checkmark$$

$O: 6 \checkmark$ $O: 6 \checkmark$

Answer:

