Stoichiometry Walk-Through

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| *Some examples using the mole highway* |
| **N2 + 3H2 🡪 2NH3*You start with 25.00g of N2 - How much H2 do you need?*** |
| **Grams A 🡪 Moles A***Use molar mass A* | 25.00g N2 1 mol N2  28.01 g N2= 0.8925mol N2 |
| **Moles A 🡪 Moles B***Use mole ratio B/A* | 0.8925mol N2 3 mol H2  1 mol N2= 2.678 mol H2 |
| **Grams A 🡪 Moles B***Use molar mass A, then mole ratio B/A* | 25.00g N2 1 mol N2 3 mol H2  28.01 g N2 1 mol N2= 2.678 mol H2 |
| **Grams A 🡪 Grams B***Use molar mass A, then mole ratio B/A, then molar mass B* | 25.00g N2 1mol N2 3mol H2 2.02g H2 28.01g N2 1mol N2 1mol H2= 5.409 mol H2 |
| **Grams A 🡪 Molecules B***Use molar mass A, then mole ratio B/A, then Avogadro’s # B* |  6.02x102325.00g N2 1mol N2 3mol H2 molec. H2 28.01g N2 1mol N2 1mol H2= 1.612 x 1024 molecules H2 |

*These are not all the combinations of routes on the mole highway, just some examples of possible routes*