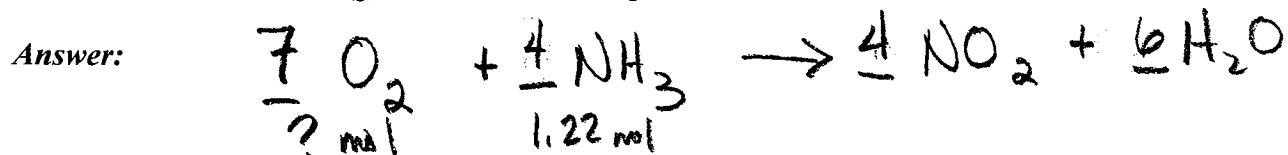
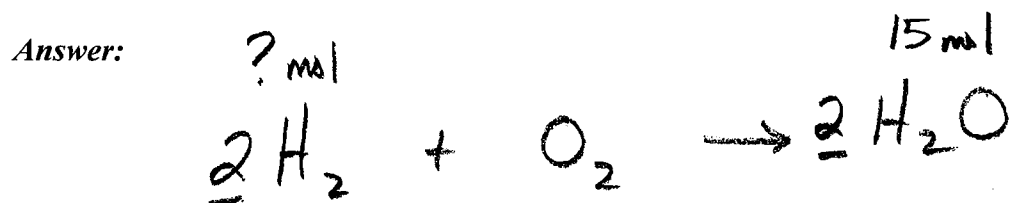


1b.) Calculate the number of moles of oxygen gas needed to burn 1.22 moles of ammonia, $\text{NH}_3(\text{g})$. The products are nitrogen dioxide, $\text{NO}_2(\text{g})$, and gaseous water produced.



$$\frac{1.22 \text{ mol NH}_3}{4 \text{ mol NH}_3} \left| \frac{7 \text{ mol O}_2}{4 \text{ mol NH}_3} \right. = \boxed{2.14 \text{ mol O}_2}$$

1c.) Calculate the number of moles of hydrogen gas needed to produce 15 moles of water, H_2O .



$$\frac{15 \text{ mol H}_2\text{O}}{2 \text{ mol H}_2\text{O}} \left| \frac{2 \text{ mol H}_2}{2 \text{ mol H}_2\text{O}} \right. = \boxed{15 \text{ mol H}_2}$$

A COUPLE OF THINGS TO NOTICE - TO HELP YOU DO WELL WITH STOICHIOMETRY:

— READ THE QUESTION CAREFULLY AND WRITE ALL INFORMATION GIVEN "ON" THE BALANCED EQUATION. NOTICE HOW I PLACED "? mol" FOR WHAT THE QUESTION ASKED? AND HOW I WROTE WHAT WAS GIVEN ABOVE (OR BELOW) THE COMPOUND/MOLECULE/ATOM. AND SHOW ALL OF THE UNITS!