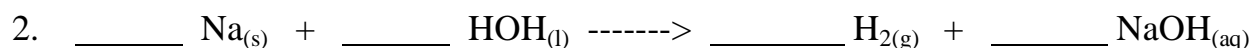


Review Exercise 8 - Mole-to-Mole Stoichiometry

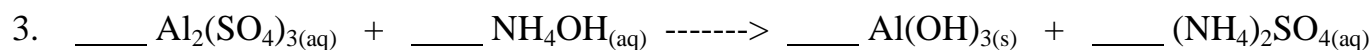
Balance the following equations and use the mole ratio from the balanced equation to complete the table which follows each equation:



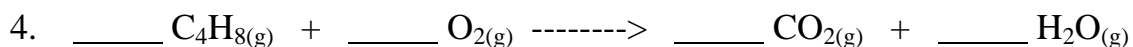
_____ $\text{H}_2\text{O}(\text{l})$	----->	_____ $\text{H}_{2(\text{g})}$	+	_____ $\text{O}_{2(\text{g})}$
5.00	.	.	.	.
.	.	.	.	0.600
.	.	3.00	.	.



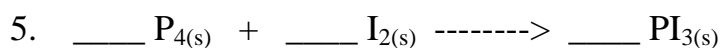
_____ $\text{Na}(\text{s})$	+	_____ $\text{HOH}(\text{l})$	----->	_____ $\text{H}_{2(\text{g})}$	+	_____ $\text{NaOH}(\text{aq})$
8.0 mol	.	.	.	.	.	.
.	.	0.20 mol	.	.	.	.
.	.	.	.	4.80 mol	.	.
.	.	.	.	.	.	16.0 mol



_____ $\text{Al}_2(\text{SO}_4)_{3(\text{aq})}$	+	_____ $\text{NH}_4\text{OH}(\text{aq})$	----->	_____ $\text{Al}(\text{OH})_{3(\text{s})}$	+	_____ $(\text{NH}_4)_2\text{SO}_{4(\text{aq})}$
3.00 mol	.	.	.	.	.	.
.	.	2.00 mol	.	.	.	.
.	.	.	.	1.00 mol	.	.
.	.	.	.	.	.	1.00 mol

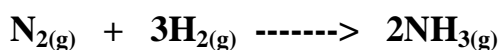


$\text{C}_4\text{H}_{8(g)}$	$\text{O}_{2(g)}$	$\text{CO}_{2(g)}$	$\text{H}_2\text{O}_{(g)}$
.	.	.	0.212
.	.	0.120	.
.	0.500	.	.
0.320	.	.	.



$\text{P}_{4(s)}$	$\text{I}_{2(s)}$	$\text{PI}_{3(s)}$
.	.	2.82
.	0.396	.
2.50	.	.

6. Use the following equation to answer the questions below.



- How many moles of hydrogen will react with 5.0 moles of nitrogen?
- How many moles of hydrogen and nitrogen will react to produce 20 moles of ammonia?
- If 4.0 moles of hydrogen are used, how many moles of nitrogen are needed?
- If 3.6 moles of nitrogen are used, how many moles of ammonia are produced?
- If 0.673 moles of ammonia are produced, how many moles of hydrogen are needed?
- If 2.3 moles of ammonia are produced, how many moles of nitrogen are needed?