

Balancing Problem Set #1

Count the total number of each kind of “reactant atom” and total number of each type of “product atom” to balance the following equations. Record the numbers in the spaces provided.



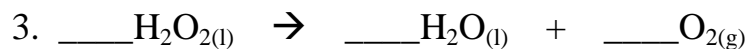
Rocket fuel is burned in a shuttle main engine.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| H | | H | |
| O | | O | |



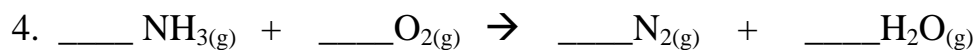
Natural gas is burned in a gas furnace in many homes.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| C | | C | |
| H | | H | |
| O | | O | |



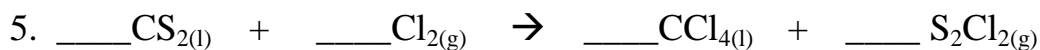
Hydrogen peroxide decomposes when put on a cut.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| H | | H | |
| O | | O | |



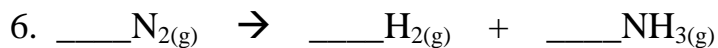
Ammonia will burn slowly in pure oxygen.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| N | | N | |
| H | | H | |
| O | | O | |



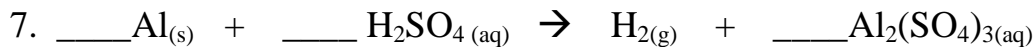
How carbon tetrachloride (banned cleaning fluid) used to be made.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| C | | C | |
| S | | S | |
| Cl | | Cl | |



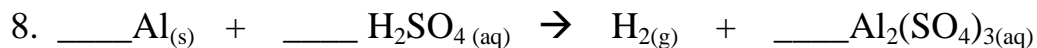
How ammonia is made.

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| N | | N | |
| H | | H | |



Aluminum should never be used to hold acid !!!

| Reactants | | Products | |
|-----------|---|----------|---|
| Element | # | Element | # |
| Al | | Al | |
| H | | H | |
| S | | S | |
| O | | O | |



Note: If the complex ion does not break up then balance the number of complex ions on each side of the chemical equation.

| Reactants | | Products | |
|-----------------|---|-----------------|---|
| Element | # | Element | # |
| Al | | Al | |
| H | | H | |
| SO ₄ | | SO ₄ | |

Problem Set #2

