Balancing Equations Practice

Chemistry Name

1 Hydrogen gas combines with nitrogen gas to form ammonia, which has the formula NH3.

a) Write an equation for this chemical reaction, then balance.

b) Draw a picture to show how this reaction occurs at the atomic level.





2 Balance the following equation. Then indicate the number of atoms of each element that exist on each side of the equation. *The reactant and product numbers should equal each other.*

**\_1\_** (NH4)2SO4 + **\_2\_**NaOH → **\_2\_**NH3 + **\_2\_**H2O + **\_1\_**Na2SO4

|  |  |  |
| --- | --- | --- |
|  | *reactant* | *product* |
| **H** | 10 | 10 |
| **O** | 6 | 6 |
| **N** | 2 | 2 |
| **S** | 1 | 1 |
| **Na** | 2 | 2 |

3 Balance each of the following equations.

a. **\_6\_**Mg + **\_1\_**P4 →  **\_2\_**Mg3P2

 *magnesium phosphorus magnesium phosphide*

b. **\_1\_**Ca + **\_2\_**H2O → **\_1\_**Ca(OH)2 + **\_1\_**H2

 *calcium water calcium hydroxide hydrogen*

c. **\_1\_**CuCO3 + **\_1\_**H2SO4 → **\_1\_**CuSO4 + **\_1\_**H2O + **\_1\_**CO2

 *copper(II) carbonate sulfuric acid copper(II) sulfate water carbon dioxide*

d. **\_1\_**CaCl2 + **\_1\_**Na2CO3 → **\_1\_**CaCO3 + **\_2\_**NaCl

 *calcium chloride sodium carbonate calcium carbonate sodium chloride*

e. **\_1\_**C12H22O11 + **\_12\_**O2 → **\_12\_**CO2 + **\_11\_**H2O

 *sucrose oxygen carbon dioxide water*

|  |  |  |
| --- | --- | --- |
| Score | Grade |  |
| 4 | A | I can explain & teach others |
| 3 | B | I can practice without help from the teacher |
| 2 | C | I can practice with some assistance |
| 1 | D | I can practice but with frequent assistance |
| 0 | F | No attempt at problem stated |