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. Check that it is consistent with your balanced equation.

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.*

\_\_\_ (NH4)2SO4 + \_\_\_NaOH → \_\_\_NH3 + \_\_\_H2O + \_\_\_Na2SO4

|  |  |  |
| --- | --- | --- |
|  | *reactant* | *product* |
| **H** |  |  |
| **O** |  |  |
| **N** |  |  |
| **S** |  |  |
| **Na** |  |  |

3 Balance each of the following equations.

a. \_\_\_Mg + \_\_\_P4 → \_\_\_Mg3P2

b. \_\_\_Ca + \_\_\_H2O → \_\_\_Ca(OH)2 + \_\_\_H2

c. \_\_\_CuCO3 + \_\_\_H2SO4 → \_\_\_CuSO4 + \_\_\_H2O + \_\_\_CO2

d. \_\_\_CaCl2 + \_\_\_Na2CO3 → \_\_\_CaCO3 + \_\_\_NaCl

e. \_\_\_C12H22O11 + \_\_\_O2 → \_\_\_CO2 + \_\_\_H2