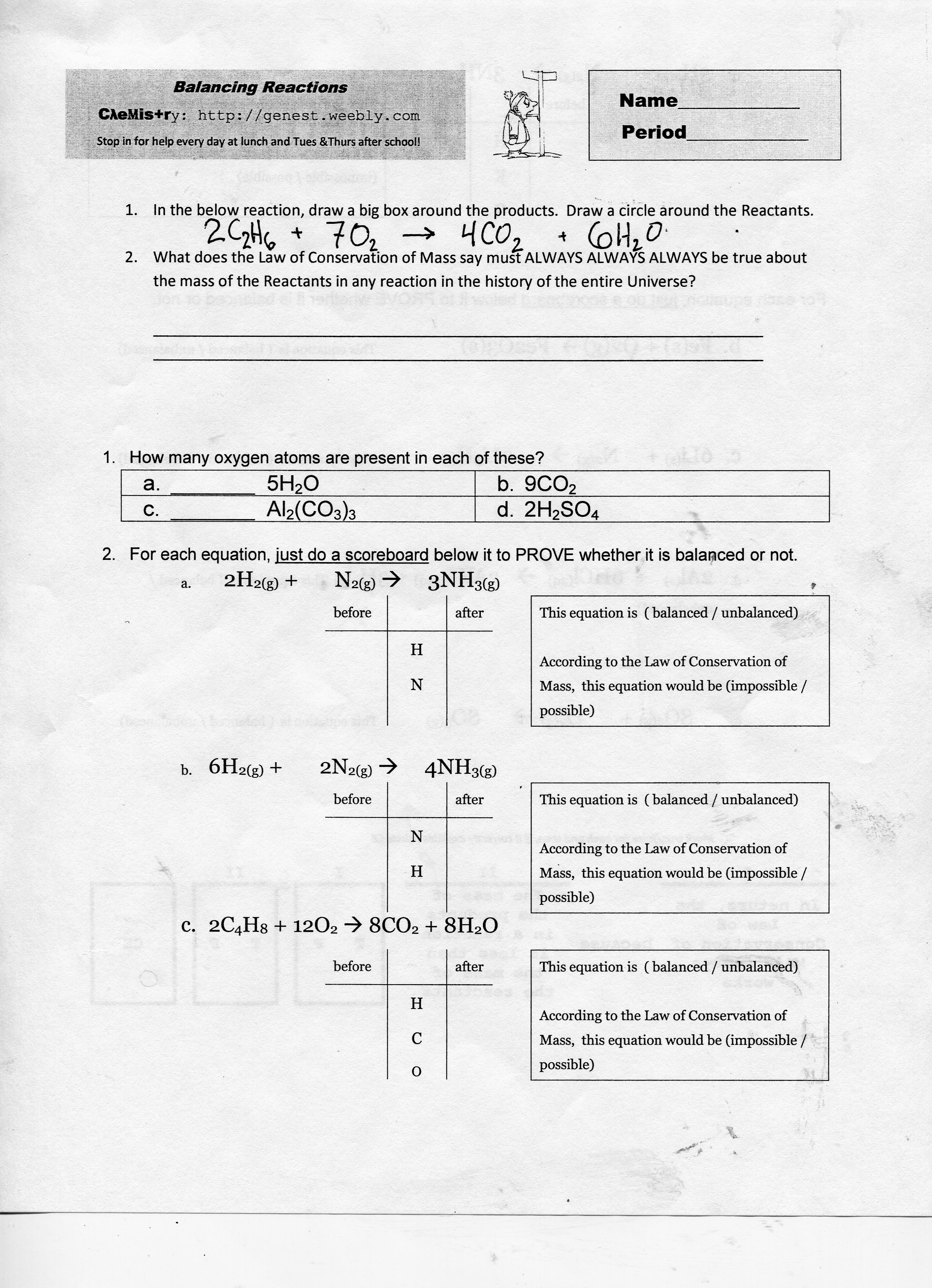
|  |  |  |
| --- | --- | --- |
| *Balancing Reactions*  CλeMis+ry: http://genest.weebly.com  Stop in for help every day at lunch and Tues &Thurs after school! |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. In the below reaction, draw a big box around the products. Draw a circle around the Reactants.



1. What does the Law of Conservation of Mass say must ALWAYS ALWAYS ALWAYS be true about the mass of the Reactants in any reaction in the history of the entire Universe?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many oxygen atoms are present in each of these?

|  |  |
| --- | --- |
| * 1. \_\_\_\_\_\_\_ 5H2O | * 1. 9CO2 |
| * 1. \_\_\_\_\_\_\_ Al2(CO3)3 | * 1. 2H2SO4 |

1. For each equation, just do a scoreboard below it to PROVE whether it is balanced or not.
   1. 2H2(g) + N2(g) 🡪 3NH3(g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | before |  | after |  | This equation is ( balanced / unbalanced)  According to the Law of Conservation of Mass, this equation would be (impossible / possible) |
|  | H |  |  |
|  | N |  |  |
|  |  |  |  |

* 1. 6H2(g) + 2N2(g) 🡪 4NH3(g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | before |  | after |  | This equation is ( balanced / unbalanced)  According to the Law of Conservation of Mass, this equation would be (impossible / possible) |
|  | N |  |  |
|  | H |  |  |
|  |  |  |  |

* 1. 2C4H8 + 12O2 🡪 8CO2 + 8H2O

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | before |  | after |  | This equation is ( balanced / unbalanced)  According to the Law of Conservation of Mass, this equation would be (impossible / possible) |
|  | H |  |  |
|  | C |  |  |
|  | O |  |  |

1. 3H2(g) + N2(g) 🡪 3NH3(g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | before |  | after |  | This equation is ( balanced / unbalanced)  In real life, this equation would be (impossible / possible) |
|  | H |  |  |
|  | K |  |  |
|  | O |  |  |

For each equation, just do a scoreboard below it to PROVE whether it is balanced or not.

1. Fe(s) + O2(g) 🡪 Fe2O3(s) This equation is ( balanced / unbalanced)
2. 6Li(s) + N2(g) 🡪 2Li3N(s) This equation is ( balanced / unbalanced)
3. 2Al(s) + 6HCl(aq) 🡪 2AlCl3(aq) + 3H2(g) This equation is ( balanced / unbalanced)
4. SO2(g) + O2(g)  🡪 SO3(g) This equation is ( balanced / unbalanced)

***Mark true/false for each and then, if II correctly explains I circle CE***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **I** |  | **II** |  | **I** |  | **II** |  |  |
| **In nature, the Law of Conservation of Mass always works** | **because** | **The mass of the products in a reaction is less than the mass of the reactants** |  | **T F** |  | **T F** |  | **CE** |