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

1. What are the four substances are in a combustion reaction?

\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_

1. Write a balanced reaction for the combustion of C2H6

\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_

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| 1. The box on the left shows the *reactants* of a combustion reaction. Make it a balanced reaction by drawing the products | | |
|  | | |
| Reactants | → | Products |

Balance each reaction by writing the smallest integers possible

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. \_\_\_H2 + \_\_\_Br2 → \_\_\_HBr | | | 1. \_\_CrBr3 + \_\_Na2SiO3 → \_\_Cr2(SiO3)3 + \_\_NaBr | |
| When placed in a test tube and ignited, iodine and aluminum give off bright light and produce a single substance.  Draw a cartoon of what would be in the test tube after the reaction finished. | | | | |
|  | | | | |
| A test tube, with the reactants (five molecules) | → | | | The same test tube, with the reactants (two molecules) |
| Inside a small box, Saturday |  | 1. Write a balanced reaction that describes what occurred inside the box shown to the left. | | |
|  |  |
| Same box, on Sunday |  |

1. Name each substance. Remember to use the back of your periodic table.

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | This one needs a Roman numeral in its name!    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Balance each reaction by writing the smallest integers possible

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| --- | --- |
| 1. (NH4)2Cr2O7 → Cr2O3 + N2 + H2O 2. KOH + Cl2 → KCl + KClO + H2O | 1. Ca(OH)2 + H3PO4 → Ca3(PO4)2 + H2O 2. Cu(NO3)2 → CuO + NO2 + O2 |

1. ~~Osmium is toxic; only try the following reactions on paper!~~

~~You want to know which reaction happens in lab:~~

***~~first possibility:~~*** ~~OsCl~~~~2~~ ~~+ 2Li 1 Os + 2LiCl~~

***~~second possibility:~~*** ~~OsCl~~~~3~~ ~~+ 3Li 1 Os + 3LiCl~~

~~And in the lab, your assistant measures that 0.411 moles LITHIUM reacts with 0.137 moles of LITHIUM.~~

1. ~~This ratio of is \_\_\_\_\_\_\_~~
2. ~~So the correct equation above is the (first/second) equation.~~