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

1. Find the number of grams of O2 which are needed to produce 20.0 g of P2O5 at STP, according to this balanced equation:

P4(s) + 5O2(g) 2P2O5(s)

1. For this balanced reaction, calculate the following

CaH2 + 2 H2O → Ca(OH)2 + 2 H2

* 1. If 3.03x10-5 grams of CaH2 react, how many grams of water react?

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| \_\_\_\_ g CaH2 | \_\_\_\_\_ mol CaH2 | \_\_\_\_\_ mol H2O | \_\_\_\_\_ grams H2O | = |  |
|  | \_\_\_\_\_ g CaH2 | \_\_\_\_\_ mol CaH2 | \_\_\_\_\_ mol H2O |  |

* 1. If 0.746 moles of water react, how many moles of CaH2 will react?
  2. If 0.746 GRAMS of water react, how many GRAMS of CaH2 will react?

**Hints: On 2(b) just do a one step conversion using the coefficients but on 2(c) calculate the same as on 2(a)**

1. Using the Hoffman apparatus for electrolysis, a chemist decomposes 36 g of water into its gaseous elements. How many grams of hydrogen gas should she get (theoretical yield)?
2. Suppose 4.61 g of zinc was allowed to react with hydrochloric acid to produce zinc chloride and hydrogen gas.
   1. How much zinc chloride should you get?
   2. Suppose that you actually recovered 8.56 g of zinc chloride. What is your percent yield?