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

Justine Curgenven & Sarah Outen, first modern crossing of the Aleutian Islands by kayak

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)

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| 20.0 g P2O5 | \_\_\_\_\_ mol P2O5 | \_\_\_\_\_ mol O2 | \_\_\_\_\_ grams O2 | = |  |
|  | \_\_\_\_\_ g P2O5 | \_\_\_\_\_ mol P2O5 | \_\_\_\_\_ mol O2 |  |

1. For the same reaction described in the previous problem, find the number of grams of O2 which are needed to produce 9.34x10-4 g of P2O5 at STP
2. For the same reaction described in the previous problem, find the number of grams of P4 which are needed to react with 5.35x105 g of O2 at STP
3. Rewrite these as symbolic, balanced equations:
   1. **sodium iodide (aq) + potassium nitrate (aq) arrowpotassium iodide (s) + sodium nitrate (aq)**
   2. **hydrogen (g) + oxygen (g) arrowwater (g)**
   3. Baking soda added to vinegar (acetic acid) makes dissolved sodium acetate, bubbles of carbon dioxide gas and water.
4. For this balanced reaction, calculate the following

2 C6H6 + 15 O2 → 12 CO2 + 6 H2O?

* 1. If 0.446 moles of oxygen gas react, how many moles of C6H6 will react?
  2. If 3.44x104 moles of carbon dioxide form, how many moles of C6H6 reacted?
  3. If 0.094 moles of oxygen gas react, how many moles of carbon dioxide will form?

1. For this balanced reaction, calculate the following

CaH2 + 2 H2O → Ca(OH)2 + 2 H2

* 1. If 0.746 moles of water react, how many moles of CaH2 will react?
  2. If 7.40x10-3 moles of calcium hydroxide form, how many moles of H2O reacted?
  3. If 9.94 moles of calcium hydride react, how many moles of hydrogen gas will form?

1. (Just for fun) Email to me the name of a woman that you would like to see in one of our worksheets this month for women’s history month .