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| Review #3  CλeMis+ry: http://genest.weebly.com |  | Name\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_ |

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| Reaction 1  2Al + 3I2 → 2AlI3 ∆H = -600kJ  This reaction produces a colorless solid BUT if you see a purple cloud during the reaction, that comes from I2(s) 🡪 I2(g) due to the highly exothermic heat release. |

If 100. grams of aluminum react, how much heat is released?

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| Reaction 2  8Al(s) + 3Fe3O4(s) 🡪 4Al2O3(s) + 9Fe(L) ∆H = -1600kJ |

If the reaction released 44,000 kJ, how many grams of aluminum reacted?

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| Reaction 3  NaOH + HCl 🡪 NaCl HOH |

**Titration problems:**

1. A 100.0 mL sample of 0.50 M HCl is titrated with 0.10 M NaOH. The titration was finished after 34.5 mL of NaOH were added. The indicator used was phenolphthalein.
   1. Write the reaction.
   2. Write what color phenolphthalein would be in the beginning\_\_\_\_\_\_\_ At the end\_\_\_\_\_\_\_\_
   3. Rewrite the concentration of NaOH using mol/L:
   4. Find the volume of NaOH in L:
   5. Find the moles of NaOH that reacted:
   6. Find the moles of HCl that reacted:
   7. Find the concentration of HCl:
2. A 45.7 mL sample of 0.75 M HCl is titrated with 0.22 M NaOH. The titration was finished after 84.5 mL of NaOH were added. The indicator used was phenolphthalein.
   1. Write the reaction.
   2. Write what color phenolphthalein would be in the beginning\_\_\_\_\_\_\_ At the end\_\_\_\_\_\_\_\_
   3. Rewrite the concentration of NaOH using mol/L:
   4. Find the volume of NaOH in L:
   5. Find the moles of NaOH that reacted:
   6. Find the moles of HCl that reacted:
   7. Find the concentration of HCl:

Tomorrow we will do the above problem in lab.