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| calculating joules of a reaction  CλeMis+ry: http://genest.weebly.com  Stop in for help every day at lunch and Tues,&Thurs after school!  After-hours question? Email me at home: [eagenest@madison.k12.wi.us](mailto:eagenest@madison.k12.wi.us) |  | Name\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_ |

1. Sulfur reacts with excess oxygen gas to produce sulfur trioxide. In the balanced equation, when 2 moles of sulfur react, 791.4 kilojoules are released

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| 1. Write the balanced chemical equation   \_\_\_\_\_ + \_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_   1. In your answer to (a), include the energy term as either a reactant or product. In other words, to the balanced equation you wrote above, write 791.4 kJ onto either the right or left side, depending on whether you think the reaction took in or gave off energy. 2. Rewrite the balanced reaction but now show the energy term using ∆H notation. 3. Tell whether the reaction is endothermic or exothermic: ­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. What mass of oxygen gas is consumed when 35 kJ are released in the reaction above? 5. How much energy is released by the reaction when 50.0 grams of sulfur react? |

1. Nitrogen gas and oxygen gas can combine to produce nitrogen monoxide, NO. In the balanced reaction when one mole of N2 reacts, the reaction absorbs 88.0 kJ of energy from the surroundings.

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| 1. Write the balanced chemical equation   \_\_\_\_\_ + \_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_   1. In your answer to (a), include the energy term as either a reactant or product. In other words, to the balanced equation you wrote above, write 791.4 kJ onto either the right or left side, depending on whether you think the reaction took in or gave off energy. 2. Rewrite the balanced reaction but now show the energy term using ∆H notation. 3. Tell whether the reaction is endothermic or exothermic: ­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. What mass of nitrogen monoxide gas is produced when 35 kJ are absorbed in the reaction above? 5. How much energy is absorbed by the reaction when 0.697 grams of nitrogen react? |

**[Rerun of Friday’s quiz question that was also on the Piggy Bank Worksheet and the Wheelbarrow Worksheet.]**

1. Calculate the molarity of **each** ion present in the following solution. .A 0.04661 mole sample of calcium chloride is dissolved in enough water to make 225 mL of solution.
2. Determine the molar concentration of chloride ion [Ca2+ ] in this solution
3. Determine the molar concentration of chloride ion [Cl- ] in this solution