

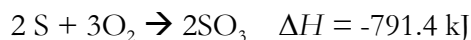
Name _____ Period _____

Thermochemistry Worksheet #2

The **molar enthalpy of reaction** (ΔH_{rxn}) is the amount of heat transferred during a reaction. It is reported in kilojoules per mole of reactant. A reaction that produces heat is **exothermic** and has a negative ΔH_{rxn} . A reaction that absorbs heat is **endothermic** and has a positive ΔH_{rxn} .

Answer the following questions. Show all work and report answers with units.

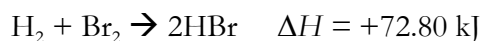
How much heat will be released when 6.44 g of sulfur reacts with excess O_2 according to the following equation?



How much heat will be released when 4.72 g of carbon reacts with excess O_2 according to the following equation?



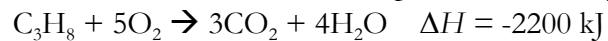
How much heat will be absorbed when 38.2 g of bromine reacts with excess H_2 according to the following equation?



How much heat will be released when 1.48 g of chlorine reacts with excess phosphorus according to the following equation?



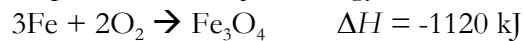
What mass of propane, C₃H₈ must be burned in order to produce 76,000 kJ of energy?



How much heat will be absorbed when 13.7 g of nitrogen reacts with excess O₂ according to the following equation?



What mass of iron must react to produce 3600 kJ of energy?



How much heat will be released when 12.0 g of H₂ reacts with 76.0 g of O₂ according to the following equation?

