**Dougherty Valley HS AP Chemistry**

**WORKSHEET #3**

**Thermochemistry – Enthalpy of Formations**

**Name: Date: Period: Seat #:**

Show all work

$$∆H°= Σ∆H\_{f}^{°} products-Σ∆H\_{f}^{°} reactants $$

**Directions**: use your textbooks appendix to calculate the standard enthalpy change for each of the following reactions using heats of formation. Must show all work to receive credit. These are from another textbook, ΔHf values may be a bit different.

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| [1] \_\_SO2(g) + \_\_O2(g) → \_\_SO3(g) (−196.6 kJ) | [2] \_\_Mg(OH)2(s) →\_\_MgO(s) + \_\_H2O(*l*) (37.1 kJ) |
| [3] \_\_N2O4(g) + \_\_H2(g) →\_\_N2(g) + \_\_H2O(g) (−976.94 kJ) | [4] \_\_SiCl4(l) + \_\_H2O(l) →\_\_SiO2(s) + \_\_HCl(g) (−68.3 kJ) |
| [5] \_\_HBr(g) + \_\_O2(g) →\_\_H2O(l) + \_\_Br2(*l*) (−426.74 kJ) | [6] \_\_NaOH(s) + \_\_SO3(g) →\_\_Na2SO4(s) + \_\_H2O(g) (−382.5 kJ) |
| [7] \_\_CH4(g) + \_\_Cl2(g) →\_\_CCl4(*l*) + \_\_HCl(g) (−433.7 kJ) | [8] \_\_Fe2O3(s) + \_\_HCl(g) →\_\_FeCl3(s) + \_\_H2O(g) (−150 kJ) |