

Name _____

WS Heat of reaction

Use the given standard enthalpies of formation to determine the heat of reaction of the following reaction:

Note Heat of formation of elements is 0.

$$\begin{aligned}\Delta H_f^\circ \text{ N}_2\text{H}_4(l) &= +50.6 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ H}_2\text{O}(l) &= -285.9 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ CO}_2(g) &= -393.5 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ C}_3\text{H}_6\text{O}(l) &= -249.5 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ CS}_2(g) &= +177.4 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ SO}_2(g) &= -296.8 \text{ kJ/mole} \\ \Delta H_f^\circ \text{ C}_6\text{H}_{12}(l) &= -156.4 \text{ kJ/mole}\end{aligned}$$

