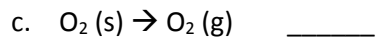
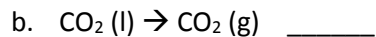
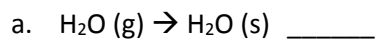


Accel. Weekly Review #31. Determine the sign (+ or -) of ΔH in the processes below:

Substance	Specific Heat (J/g x °C)
$\text{H}_2\text{O (s)}$	2.03
$\text{H}_2\text{O (l)}$	4.184
$\text{H}_2\text{O (g)}$	2.01

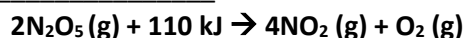
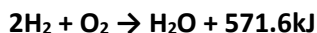
2. How much energy is need to boil 25.0 g of water?

Water
$\Delta H_{\text{fus}} = 6.01 \text{ kJ/mol}$
$\Delta H_{\text{vap}} = 40.7 \text{ kJ/mol}$

3. What is the final temperature of a 10.5 g piece of copper ($c = 0.385$) at 25°C absorbs 150 J of energy?

4. How much energy is lost when freezing 5.6 g of water?

5. How much energy is lost when the temperature of 35.0 g of water decreases from 50.0°C to 25.0°C?

6. How many kilojoules of energy will be need to decompose 10.8 grams of N_2O_5 gas? Is this an exothermic or endothermic reaction? _____7. What is the heat change when 18.6 g of Hydrogen reacts with excess O_2 according to the following equation? Is this an exothermic or endothermic reaction? _____8. Methane (CH_4) gas is used as a fuel for heating hot water in many of our homes. In addition it is the gas used to fuel the Bunsen burners in our lab. Write the thermochemical equation for the combustion of methane gas. The ΔH for methane is -890 kJ/mol .