1. How much energy (in kJ) is required to completely vaporize 200.0 g of 25.00ºC liquid water?

Properties of Water

<table>
<thead>
<tr>
<th>Specific Heats (C):</th>
</tr>
</thead>
<tbody>
<tr>
<td>gas = 1.84 J/g°C</td>
</tr>
<tr>
<td>liquid = 4.184 J/g°C</td>
</tr>
<tr>
<td>solid = 2.09 J/g°C</td>
</tr>
</tbody>
</table>

Heat of Vaporization:
\[ \Delta H_{\text{vap}} = 40.7 \text{ kJ/mol} \]

Heat of Fusion:
\[ \Delta H_{\text{fus}} = 6.01 \text{ kJ/mol} \]

Answer: ________________
2. How much energy (in kJ) is required to melt 150.0 g of –18.00 °C ice, and bring the resulting liquid water up to 25.00°C?

**Properties of Water**

**Specific Heats (C):**
- gas = 1.84 J/g°C
- liquid = 4.184 J/g°C
- solid = 2.09 J/g°C

**Heat of Vaporization:**
- $\Delta H_{\text{vap}} = 40.7$ kJ/mol

**Heat of Fusion:**
- $\Delta H_{\text{fus}} = 6.01$ kJ/mol

Answer: ________________