

1) When calcium chloride is dissolved in water, heat is given off. Write the balanced ionic equation/rxn below; include physical states.

2) If 0.025 moles of calcium chloride is dissolved in water, how much heat is generated?  
(Given  $\Delta H_{\text{dissolution}} = -81.8 \text{ kJ/mol}$ )

3) If 2.50 grams of calcium chloride is dissolved in water, how much heat is generated?  
(Given  $\Delta H_{\text{dissolution}} = -82.4 \text{ kJ/mol}$ )

4) If 0.025 moles of calcium chloride is dissolved in 10.0 mL water at 25 °C, what will be the final temperature of the water?

5) If 2.50 grams of calcium chloride is dissolved in 10.0 mL water at 25 °C, what will be the final temperature of the water?

6) When ammonium nitrate is dissolved in water, heat is consumed from the surroundings. Write the balanced ionic equation/rxn below; include physical states.

7) If 0.028 moles of ammonium nitrate is dissolved in water, how much heat is consumed?  
(Given  $\Delta H_{\text{dissolution}} = +23.5 \text{ kJ/mol}$ )

8) If 2.40 grams of ammonium nitrate is dissolved in water, how much heat is consumed?  
(Given  $\Delta H_{\text{dissolution}} = +23.5 \text{ kJ/mol}$ )

9) If 0.028 moles of ammonium nitrate is dissolved in 10.0 mL water at 25 °C, what will be the final temperature of the water?

10) If 2.40 grams of ammonium nitrate is dissolved in 10.0 mL water at 25 °C, what will be the final temperature of the water?