



Chemistry

Name: _____

Section _____

Heat Calculations WS

Date: _____

Solve the following problems. Write the formula, show all substitutions, show answers to the correct number of significant digits, and include all units and cancellations.

1. How many joules are needed to melt 500. g of ice at its freezing point?

2. How many kilojoules are needed in Problem #1?

3. How much heat is needed to vaporize 500. g of water at its boiling point?

4. If 5,100 J are given off when a sample of water freezes, what is the mass of the water?

5. If 57,000 J are given off when a sample of steam condenses, what is the mass of the steam?

6. How many J are needed to raise the temperature of 500. g of water from 20°C to 30°C?

7. How many J would be absorbed if 500. g of water has its temperature raised by 55 °C?