Chemistry – Calculations with Specific Heat

1. How many Joules of heat are required to raise the temperature of 1000g of water from 10.2°C to 26.8°C?

2. How many kilojoules of heat are released when 275g of water cools from 85.2 °C to 38.4 °C?

3. What temperature change will 100.0mL of water undergo when it absorbs 1200J of heat?

4. What will the change in temperature be if 1700J of heat is absorbed by 80.0mL of water?

5. what will the final temperature be if 45.0mL of water at 15.4 °C absorbs 900J of heat?

6. What will the final temperature be if 2500J of heat is released by 25mL of water with an initial temperature of 35 °C?

7. A quantity of water is heated from 25.0 °C to 36.4 °C by absorbing 1250J. What is the mass of the water?

8. What is the mass of a sample of water that is heated from 10.0 °C to 24.6 °C while absorbing 4100J?

9. What is the specific heat of lead if 30.0g of lead undergoes a 250 °C change while absorbing 900J?

10. A 1000g block of aluminum releases 26,000J of heat as it cools from 55.0 °C to 25.0 °C. What is the specific heat of aluminum?