

Specific Heat Practice Worksheet

1. An aluminum skillet weighing 1.58 kg is heated on a stove to 173 °C. Suppose the skillet is cooled to room temperature, 23.9 °C. How much heat energy (joules) must be removed to cause this cooling? The specific heat of aluminum is 0.901 J/(g · °C).
2. It takes 487.5 J to heat 25 grams of copper from 25 °C to 75 °C. What is the specific heat in Joules/g·°C?
3. The specific heat of ethanol is 2.46 J/g °C. Find the heat required to raise the temperature of 193 g of ethanol from 19°C to 35°C.
4. When a 120 g sample of aluminum (Al) absorbs 9612 J of energy, its temperature increases from 25°C to 115°C. Find the specific heat of aluminum.
5. A 1.0 kg sample of metal with a specific heat of 0.50 KJ/KgC is heated to 100.0C and then placed in a 50.0 g sample of water at 20.0C. What is the final temperature of the metal and the water?