Specific Heat Worksheet

Q=mCΔT, where Q = heat energy, m = mass, and T = temperature

1. A 0.01575-kg piece of iron absorbs 1086.75 joules of heat energy, and its temperature changes from 25⁰C to 175⁰C. Calculate the heat capacity of iron.

2. How many J of heat are needed to raise the temperature of 10.0 kg of aluminum from 22⁰C to 55⁰C?

3. Calculate the heat capacity of a piece of ice if 1.30 kg of the wood absorbs 6.75×10^4 joules of heat, and its temperature changes from 32⁰C to 57⁰C.

4. 2.0 kg of carbon is heated from 25⁰C to 55⁰C, and absorbs 42600 joules of heat in the process. Calculate the heat capacity of carbon.

5. What is the Specific heat capacity of silver metal if 55.00 kg of the metal absorbs 193875 joules of heat and the temperature rises 15.0⁰C?

6. What is the change in temperature of 1.5 kg of zinc if it absorbs 1000.0 joules of heat?