Practise questions

1. Calculate the amount of heat needed to raise the temperature of 8.4 kg of water by 6.0°C

2. Determine the heat lost when 3.7 kg of water cools from 31°C to 24°C.

3. An electric immersion heater delivers 0.50 mJ of energy to 5.0 kg of a liquid, changing its temperature from 32°C to 42°C. Find the specific heat capacity of the liquid. Is it water?

4. Water from a tap at 11°C sits in a watering can where it eventually reaches 21°C.
   a) Where did the energy that warms up the water come from?
   B) Determine the mass of the water sample if it has absorbed 21 kJ of energy during the temperature change.

ANSWERS

1. 2.1 x 105 J 2. 1.1 x 105 J 3. Cw = 1.0 x 103 J/kg•C 4. B) (0.50 kg)