Latent Heat Practice

Specific heat capacity of aluminum = 910 J/kgK
Specific heat capacity of water = 4200 J/kgK
Specific latent heat of fusion of ice = 335 000 J/kg
Specific latent heat of evaporation of water = 2.26 MJ/kg

1. How much heat energy is needed to heat 4 kg of aluminum by 8°C?

$$Q \quad = \quad (M) \quad (C) \quad (\Delta T)$$

2. If 48,000 J of heat energy is given off when a 2kg block of metal cools by 12°C, what is the specific heat capacity of the metal?

$$Q \quad = \quad (M) \quad (C) \quad (\Delta T)$$

3. How much heat energy is given out when 3 kg of water at 40°C cools to 25°C?

$$Q \quad = \quad (M) \quad (C) \quad (\Delta T)$$