

**Support Worksheet – Topic 3, Worksheet 1**

- 1 Convert $-120\text{ }^{\circ}\text{C}$ to kelvin. [1]
- 2 Convert 300 K to degrees Celsius. [1]
- 3 The temperature of a liquid increases from $-25\text{ }^{\circ}\text{C}$ to $+5.0\text{ }^{\circ}\text{C}$. Express the temperature change in kelvin. [1]
- 4 Define the internal energy of a substance. [2]
- 5 State what the internal energy of an ideal gas consists of. [1]
- 6 The temperature of a body increased by 20 K when 500 J of energy were supplied to the body. Calculate the thermal capacity of the body. [1]
- 7 Energy is supplied to a liquid of mass m at a rate P . After a time t the temperature of the liquid increased by θ degrees. State an expression for the specific heat capacity of the liquid. [2]
- 8 Define specific latent heat of fusion. [2]
- 9 In order to boil away 24 g of a liquid at its boiling point 3800 J of energy must be supplied to the liquid. Determine the specific latent heat of vaporisation of the liquid. [2]
- 10 State two differences between evaporation and boiling. [2]