

12 A piece of metal of mass m , specific heat capacity c and temperature $20\text{ }^{\circ}\text{C}$ is placed into a liquid of temperature $100\text{ }^{\circ}\text{C}$. The liquid, which is in a well-insulated container, has mass $3m$ and specific heat capacity $2.5c$.

What is the temperature of the liquid when thermal equilibrium is reached?

A $56\text{ }^{\circ}\text{C}$

B $60\text{ }^{\circ}\text{C}$

C $85\text{ }^{\circ}\text{C}$

D $91\text{ }^{\circ}\text{C}$

13 The graph shows the variation with time t of temperature change ΔT for 1 kg of a substance.