**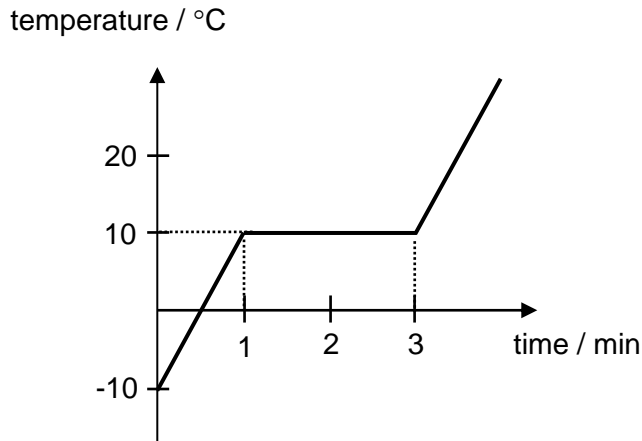12** A student heats a 500 g solid sample at an initial temperature of -10°C. The rate of heat absorbed by the sample is constant at 200 W. The graph below shows how the temperature of the sample varies with time.



temperature / °C

What is the specific latent heat of fusion of the solid sample?

**A** 12 kJ kg$^{-1}$ **B** 18 kJ kg$^{-1}$ **C** 36 kJ kg$^{-1}$ **D** 48 kJ kg$^{-1}$