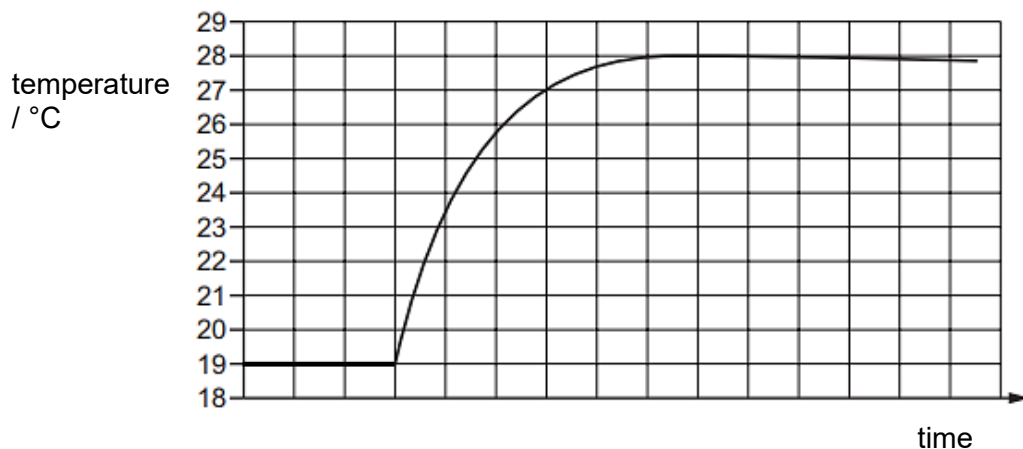


12 A glass stopper of mass 100 g at a temperature of 100 °C is dropped into 160 g of water.

The water has a temperature sensor fixed within it. The variation of the output from the temperature sensor with time is displayed on a computer monitor.



The specific heat capacity of water is $4200 \text{ J kg}^{-1} \text{ K}^{-1}$.

What is the specific heat capacity of glass?

- A** $840 \text{ J kg}^{-1} \text{ K}^{-1}$
- B** $1400 \text{ J kg}^{-1} \text{ K}^{-1}$
- C** $1900 \text{ J kg}^{-1} \text{ K}^{-1}$
- D** $4600 \text{ J kg}^{-1} \text{ K}^{-1}$

13 When a frictionless and well-insulated bicycle pump is used to pump up a tyre, the air in