11 Cooling water enters the heat exchanger in the turbine hall of a nuclear power station at 6.0 °C and leaves at 14.0 °C. The rate of heat removal by the water is 6.7 x 10^9 J per minute.

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

What is the rate of water flow?

A $\dfrac{6.7 \times 10^9 \times 60}{4200 \times 8.0}$ kg s^{-1}

B $\dfrac{6.7 \times 10^9}{4200 \times 8.0 \times 60}$ kg s^{-1}

C $\dfrac{4200 \times 8.0}{6.7 \times 10^9 \times 60}$ kg s^{-1}

D $\dfrac{4200 \times 8.0 \times 60}{6.7 \times 10^9}$ kg s^{-1}