20 A railway engine accelerates a train of total mass 800 tonnes (1 tonne = 1000 kg) from rest to a speed of $50\,m\,s^{-1}$.

How much work must be done on the train to reach this speed?

A $1.0 \times 10^6\,J$ **B** $2.0 \times 10^6\,J$ **C** $1.0 \times 10^9\,J$ **D** $2.0 \times 10^9\,J$