

**17** A car of mass 1500 kg accelerates from an initial speed of  $15 \text{ ms}^{-1}$ . This acceleration causes the car to gain  $3.0 \times 10^5 \text{ J}$  of kinetic energy.

What is the change in the speed of the car?

A  $5.4 \text{ ms}^{-1}$

B  $10 \text{ ms}^{-1}$

C  $20 \text{ ms}^{-1}$

D  $25 \text{ ms}^{-1}$