

- 9 The driving force  $F$  of a car of mass  $m$  causes the car to accelerate. In a time  $t$  it travels a distance  $s$  and its speed increases from  $u$  to  $v$ .

What is the useful work done by the car engine?

A  $\frac{Fs}{t}$

B  $m(v - u)$

C  $Ft$

D  $\frac{m(v^2 - u^2)}{2}$