

- 7 An object accelerates uniformly from rest to speed  $v$ . It then moves at constant speed  $v$  for a time of 8.0 s before decelerating uniformly to rest. The total time taken is 12.0 s, and the total distance travelled is 60 m.

What is the speed  $v$ ?

A  $3.0\text{ ms}^{-1}$

B  $5.0\text{ ms}^{-1}$

C  $6.0\text{ ms}^{-1}$

D  $15\text{ ms}^{-1}$