

- 8** An insect jumps with an initial vertical velocity of  $1.0 \text{ m s}^{-1}$ , reaching a maximum height of  $3.5 \times 10^{-2} \text{ m}$ . Assume the deceleration is uniform.

What is the magnitude of the deceleration?

- A**  $3.6 \text{ m s}^{-2}$       **B**  $9.8 \text{ m s}^{-2}$       **C**  $14 \text{ m s}^{-2}$       **D**  $29 \text{ m s}^{-2}$

- 9** A body having uniform acceleration  $a$  increases its velocity from  $u$  to  $v$  in time  $t$ .