

**6** An aircraft, initially stationary on a runway, takes off with a speed of  $85\text{ km h}^{-1}$  in a distance of no more than 1.20 km.

What is the minimum constant acceleration necessary for the aircraft?

A  $0.23\text{ ms}^{-2}$

B  $0.46\text{ ms}^{-2}$

C  $3.0\text{ ms}^{-2}$

D  $6.0\text{ ms}^{-2}$

**7** A radio-controlled toy car travels along a straight line for a time of 15 s.