

1. A car is initially at rest on a straight horizontal road.

The car then accelerates along the road with a constant acceleration of 3.2 m s^{-2}

Find

(a) the speed of the car after 5 s,

(1)

(b) the distance travelled by the car in the first 5 s.

(2)

constant acceleration, so "suva"

(a) $u = 0$
 $a = 3.2 \text{ m s}^{-2}$
 $t = 5 \text{ s}$
 $v = ?$

$$v = u + at = 0 + 3.2(5) = 16 \text{ m s}^{-1}$$

(b) $s = ?$

$$s = ut + \frac{1}{2}at^2 = 0(5) + \frac{1}{2}(3.2)(5)^2 \\ = 40 \text{ m}$$