

Answer:

Car travel distance

$$s(t) = \frac{at^2}{2} + v_0t,$$

the speed is

$$v(t) = v_0 + at,$$

where a is acceleration, v_0 is initial speed.

Here

$$a = 2.5 \text{ m/s}^2$$

$$t = 3.2 \text{ s}$$

$$v(t = 3.2 \text{ s}) = 9.8 \text{ m/s}.$$

From hence

$$v_0 = v(t) - at = 9.8 \text{ m/s} - 8 \text{ m/s} = 1.8 \text{ m/s}$$

$$s = 18.56 \text{ m}$$