Question #73201, Physics / Other

A car travels with an initial velocity of 12 m/s and acceleration of 2.5 m/s^2 for a time of 2 seconds?

Solution

The distance traveled during the uniformly accelerated motion is calculated as follows.

$$d = v_0 t + \frac{at^2}{2};$$

$$d = 12 \times 2 + \frac{2.5 \times 2^2}{2} = 29 \text{ m}$$

Answer: the car travels 29 m.