

Starting from rest, how long does it take moving man to reach a velocity of 5 m/s if his acceleration is 1.75 m/s<sup>2</sup>?

Solution:

Let:

$$v = 5 \text{ m/s}$$

$$a = 1.75 \text{ m/s}^2$$

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$$S = ?$$

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$$S = \frac{1}{2}at^2$$

$$v = at \Rightarrow t = \frac{v}{a}$$

$\Rightarrow$

$$S = \frac{v^2}{2a}$$

$$S = \frac{5^2}{2 \cdot 1.75} = 7.14 \text{ s}$$

**Answer: 7.14 s.**