Question

A cyclist accelerates at a rate of $6.6 \frac{m}{s^2}$. How long will it take the cyclist to reach a speed of $14 \frac{m}{s}$ from rest?

Solution

Write down relevant formula:

$$V = at + V_0,$$

where $t -$ $time,$ $V -$ $speed$ at $time$ $t,$ $a -$ $acceleration,$ $V_0 -$ $initial$ $speed.$

Factor out t:

$$t = \frac{V - V_0}{a}$$

Plug in numbers:

$$t = \frac{14 - 0}{6.6} = \frac{14}{6.6} \approx 2.1 \ (s)$$