Answer on Question#55101 – Physics – Mechanics | Relativity

## 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:

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

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