

Answer on Question #49902 – Physics – Mechanics

1. A person travels at a constant speed of 75 Km/h for 50.0 minutes; what is the average distance that this person covers?

$v_0 = 75 \frac{km}{h} = 75 \cdot \frac{1000m}{3600s} = 20.83 \frac{m}{s}$ $t = 50s = 50 \cdot 60s = 3000s$ <hr style="border: 0.5px solid black;"/> $d = ?$	<p style="text-align: right;"><i>Solution.</i></p> <p>The distance equals to the product of the speed and the time:</p> $d = v \cdot t .$
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Let check the dimension: $[v] = \frac{m}{s} \cdot s = m .$

The average distance that the person covers is

$$d = 20.83 \cdot 3000 = 62490(m) \approx 62.5(km) .$$

Answer: 62.5 km.