

Answer on Question #45863, Physics, Mechanics | Kinematics | Dynamics

If you are driving 95 km/h along a straight road and you look to the side for 2.0 s, how far do you travel during this inattentive period?

Solution:

A motion which covers equal distance in equal interval of time is called a Uniform motion. To compute speed of motion, we simply divide the distance of travel by the time of travel.

$$v = \frac{d}{t}$$

Thus, the distance is

$$d = vt$$

In our case

$$v = 95 \frac{\text{km}}{\text{h}} = 95 \cdot \frac{1000}{3600} = 26.39 \text{ m/s},$$

$$t = 2.0 \text{ s}$$

Thus,

$$d = 26.39 \cdot 2.0 = 52.78 \text{ m}$$

Answer: $d \approx 52.8 \text{ m}.$