

Answer on Question #51546, Physics, Mechanics | Kinematics | Dynamics

8 A man leaves the garage in his house and drives to a neighboring town which is twenty kilometers away from his house on sight-seeing. He returns home to his garage two hours after. What is his average velocity from home in km/h?

- A 10
- B 0
- C 20
- D 40

Solution:

The average velocity during the course of a motion is often computed using the following formula:

$$\text{Average Speed} = \frac{\text{Distance Traveled}}{\text{Time of Travel}}$$
$$v_{av} = \frac{d_1 + d_2}{t}$$

Hence,

$$v_{av} = \frac{20 + 20}{2} = \frac{40}{2} = 20 \text{ km/h}$$

Answer: C. 20