

Answer on Question 48439, Physics, Mechanics | Kinematics | Dynamics

Question:

Ken Ranfast is the star of the cross-country team. During the recent morning run, Ken averaged a speed of 5.8m/s for 12.9 minutes. Ken then averaged a speed of 6.10 m/s for 7.1 minutes. Determine the total distance which Ken run during his 20 minute jog.

Solutions:

The total distance is the sum of distances which Ken run with a speed of 5.8m/s for 12.9 minutes and a speed of 6.10m/s for 7.1 minutes respectively. Therefore we obtain:

$$d = S_1 \cdot t_1 + S_2 \cdot t_2 = 5.8 \frac{m}{s} \cdot 12.9 \cdot 60s + 6.1 \frac{m}{s} \cdot 7.1 \cdot 60s = 7088m$$

Answer:

Total distance is 7088 meters.