Answer on Question #54868, Physics | Mechanics | Kinematics | Dynamics

Task: You started to run at 10 km/h when you left your house and you arrived at school 30 minutes later. Assuming that your average acceleration was 30 km/h^2, how fast were you running when you arrived?

Solution:

using the equation of motion v = u + at where v is the final speed, u=10 km/h is starting speed, a=30 km/h^2 is acceleration and t=0.5 hours is time.

v = 10 + (30 x 0.5) =10+15=25 km/h

Answer: 25 km/h