Answer on Question #75108-Physics-Other

an athlete throws a javeline just as it hits the ground the javeline has a horizontal velocity component of 20m per second and a vertical velocity component of 10 m per second. the magnitude of the javeline's velocity as it hits the ground is?

Solution

The magnitude of the javeline's velocity as it hits the ground is

$$V = \sqrt{(V_x)^2 + \left(V_y\right)^2}$$

$$V = \sqrt{(20)^2 + (10)^2} = 22.36\frac{m}{s}.$$

Answer: $\mathbf{22.36\frac{m}{s}}$.