

speed = horizontal \hat{i} + vertical \hat{j}
 $\hookrightarrow 3 \text{ m/s}$ $\hookrightarrow y'$

$$y = 16 - (2t - 4)^2 \quad @ \quad t = 3$$

$$y' = -2(2t - 4) \times 2$$

$$y'(3) = -8$$

$$\text{speed} = \sqrt{3^2 + (-8)^2}$$