28. Although we could use Eq. 4-26 to find where it lands, we choose instead to work with Eq. 4-21 and Eq. 4-22 (for the soccer ball) since these will give information about where *and when* and these are also considered more fundamental than Eq. 4-26. With $\Delta y = 0$, we have

$$\Delta y = (v_0 \sin\theta_0)\, t - \frac{1}{2} g t^2 \;\Rightarrow\; t = \frac{(19.5)\sin 45.0^\circ}{(9.80)/2} = 2.81 \text{ s.}$$

Then Eq. 4-21 yields $\Delta x = (v_0 \cos \theta_0)t = 38.7$ m. Thus, using Eq. 4-8 and SI units, the player must have an average velocity of

$$\vec{v}_{\text{avg}} = \frac{\Delta \vec{r}}{\Delta t} = \frac{38.7\ \hat{\text{i}} - 55\hat{\text{i}}}{2.81} = -5.8\ \hat{\text{i}}$$

which means his average speed (assuming he ran in only one direction) is 5.8 m/s.