Hoop: $y = y_0 + v_{iy}t + \frac{1}{2}a_y t^2$

$0m = 0.535m + 0.85 m/s\, t + \frac{1}{2}(-10 m/s^2)t^2$

$0m = 0.85 m/s\, t - 5t^2 + 0.535m$ $\quad x = \frac{-0.85 \pm \sqrt{0.85^2 - 4(-5)(0.5}}{2(-5)}$

$t = 0.5\ s$ $\quad x \approx 0.5$

Ball: $0m = 0.535m + 1.12 m/s\, t + \frac{1}{2}(-10 m/s^2)t^2$

$0m = -5 m/s^2\, t^2 + 1.12 m/s\, t + 0.535m$ $\quad x = -\frac{1.12 \pm \sqrt{0.45^2 - 4(-5}}{2(-5)}$

$t = 0.45\ s$ $\quad x \approx 0.45$

$V_x = \frac{\Delta x}{\Delta t}$

$V_x \Delta t = \Delta x$

hoop: $(1.1\ m/s)(0.50) = 0.55\ m$ =

Ball: $(1.3 m/s)(0.45) = 0.6m$.

I actually set up everything correctly in the calculations, but I forgot to consider the t term in solving for time. Now, correctly using the quadratic formula, the answers calculated correctly. All of the x & y components I solved for were also correct originally but the only mistake was using algebra to find t.