

During game seven of the 2014 World Series Alex Gordon hit a ball into into the left-center field gap.

Gregor Blanco misplayed the hit and gave up a single.

If Alex Gordon's hit leaves his bat at an angle of $\theta = \underline{\hspace{2cm}}$ and a initial speed of $V_0 = \underline{\hspace{2cm}}$, find V_x and V_y .



1.) Assume that the height at which the ball is hit is the same height at which Blanco intends to catch the ball. What is the horizontal distance from Blanco's glove to home plate? Assume $g = 10 \text{ m/s}^2$. Assume Blanco catches the ball this time.

a.) How much time does the ball spend in air?

b.) How far does the ball travel horizontally?

2.) The perimeter fence height at Kauffman Stadium where game seven was played is $h = \underline{\hspace{2cm}}$. In order for Gordon's hit to go over the fence, what is the maximum distance the wall can be placed horizontally from home plate?

3.) What is the maximum height reached by the ball?