

Fair territory batted ball example:

- Direction/Distance = E339 feet
- Distance from 1st base = 34 feet
- Distance from 3rd base = 337 feet

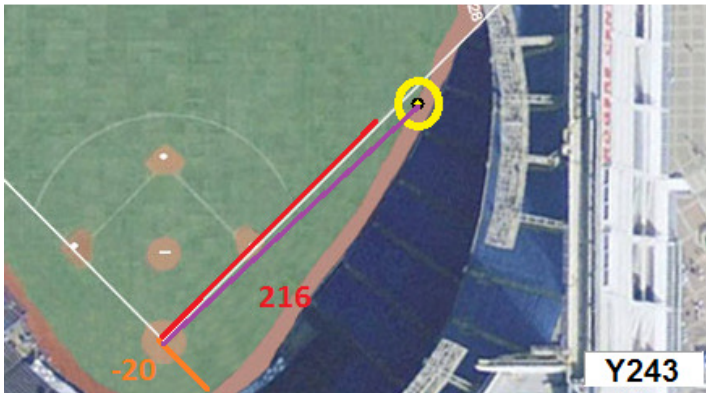
Below is a graphic representation of what this means:



- The yellow dot inside the yellow circle represents the overall direction and distance → E339
- The red line shows how far the ball traveled up the 1st base line → 34 feet
- The orange line shows how far the ball traveled up the 3rd base line → 337 feet
- Using the Pythagorean theorem of $a^2 + b^2 = c^2$, or in other words, $34^2 + 337^2 = 339^2$, which gives you the purple line
 - o Because we are dealing with large areas, we allow for a variance of +/- 30 feet in the outfield and +/- 15 feet in the infield.

Foul territory batted ball example:

- Direction/Distance = Y243 feet
- Distance from 1st base = 216 feet
- Distance from 3rd base = -20 feet



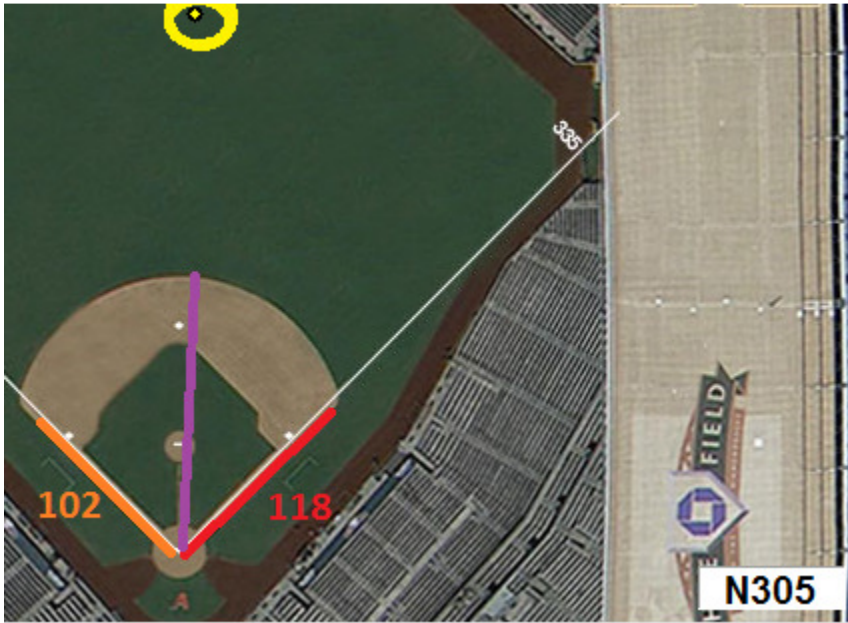
- The yellow dot inside the yellow circle represents the overall direction and distance → Y243
- The red line shows how far the ball traveled up the 1st base line → 216 feet
- The orange line shows how far the ball traveled up the 3rd base line → -20 feet
 - o Because the ball was in foul territory, it didn't travel "up" the 3rd base line, hence the negative number
- Using the Pythagorean theorem, $216^2 + (-20)^2 = 243^2$
 - o As mentioned above, we have a variance of +/- 30 feet from the overall distance shown, which is the case in this example

Groundball example (that reaches the outfield):

- Note: These situations use the distance from 1st base and distance from 3rd base data to show where the groundball left the infield/entered the outfield. To calculate where the ball was picked up (or first hit something, such as a wall), the Direction and Distance fields must be utilized.

Please see below for examples:

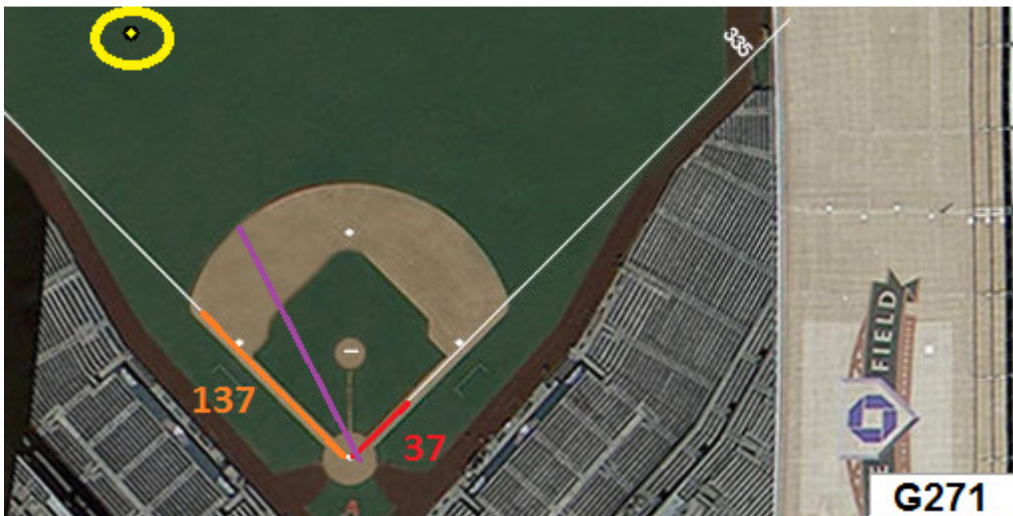
- Direction/Distance: N305
- Distance from 1st base = 118 feet
- Distance from 3rd base = 102 feet



- The yellow dot inside the yellow circle represents the overall direction and distance → N305
- The red line shows how far the ball traveled up the 1st base line as it was leaving the infield → 118 feet
- The orange line shows how far the ball traveled up the 3rd base line as it was leaving the infield → 102 feet
- Using the Pythagorean theorem, $118^2 + 102^2 = 155^2$, with the purple line representing the 155 feet

Groundball Example #2

- Direction/Distance: G271
- Distance from 1st base = 37 feet
- Distance from 3rd base = 137 feet



- The yellow dot inside the yellow circle represents the overall direction and distance → G271
- The red line shows how far the ball traveled up the 1st base line as it was leaving the infield → 37 feet
- The orange line shows how far the ball traveled up the 3rd base line as it was leaving the infield → 137 feet
- Using the Pythagorean theorem, $37^2 + 137^2 = 141^2$, with the purple line representing the 141 feet

Other notes:

- If it's a foul ball down the 3rd base line, then the 1st base distance will be negative.
- If it's a foul ball behind home plate, then both 1st and 3rd base distances will be negative (and the overall distance will be 0 since the ball did not travel past the plane of home plate).