

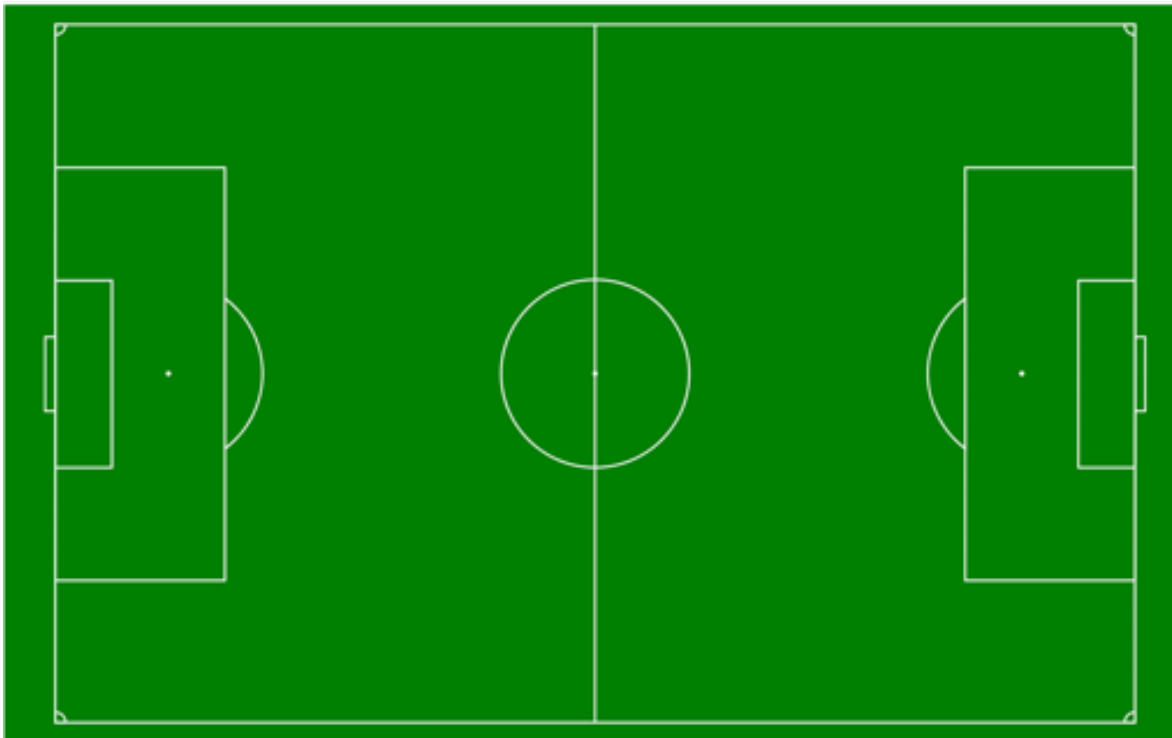
Goal! Finding the best factors for kicking a soccer ball.



Background information and Rationale

My Hypothesis is

I love playing soccer and practicing it all the time. I wonder if there was a better way to kick the ball farther? What factors cause the ball to go further? Does the field matter? Does the brand of the ball matter? Does the height of the grass matter?



Research Question

1. Does the brand of a soccer ball make the ball travel the further?
2. Which field does the soccer ball travel the furthest on?
3. Does the height of the grass affect the distance a soccer ball travels?



Investigative Methods or Procedure

1. I measured a string 150 feet long!
2. I used painters tape to measure every ten feet. I layed the string out on the grass.
3. I measured the height of the grass and recorded it then I placed a soccer ball at the beginning of the string and kicked the ball!
4. I used the string to measure how far the ball went and I used a tape measure to measure from the nearest tape mark.
5. I did this five times with each soccer ball! I did this on three different fields to collect my data.

Materials



1. Three different ball of different brands
2. One tape measure
3. A string that measure 150 feet
4. A chart to record are results

Variables:

Different Balls

Different Soccer Fields

Different Grass Heights





**Crossroad
Park**

**Coachline
Park**

**Saguaro
Bloom Park.**

Results and Data Visualization

Field Name: Cross roads

Height of Grass: $\frac{1}{16}$

	Kick 1	Kick 2	Kick 3	Kick 4	Kick 5	Average of Kicks
Adidas	165 ft	159 ft	167 ft 6 in	166 ft 10 in	202 ft 9 in	172 ft 2.5 in
Puma	165 ft 3 in	160 ft 3 in	183 ft 2 in	184 ft	205 ft 6 in	179 ft 7.6 in
Franklin	154 ft	159 ft 2 in	183 ft 3 in	153 ft 5 in	169 ft 8 in	163 feet 10.75 in

Results and Data Visualization

Field Name: Coachline

Height of Grass: 3.5 - 4

	Kick 1	Kick 2	Kick 3	Kick 4	Kick 5	Average of Kicks
Adidas	112 ft 10 in	146 ft 11 in	135 ft 9 in	125 ft 11 in	142 ft 4 in	137 ft 9 in
Puma	137 ft 2 in	131 ft 2 in	144 ft 1 in	132 ft 6 in	125 ft	133 ft 11.5 in
Franklin	101 ft	113 ft	123 ft 3 in	105 ft 2 in	107 ft 2 in	109 ft 11 in

Results and Data Visualization

Field Name: Saguaro bloom.

Height of Grass: 4 inch

	Kick 1	Kick 2	Kick 3	Kick 4	Kick 5	Average of Kicks
Adidas	106 ft 4 inches	121 ft 2 in	130 ft 4 in	128 ft 6 in	138 ft 4 in	125 ft
Puma	108 ft 5 inch	127 ft 4 in	115 ft 3 in	158 ft 10 in	111 ft 8 in	124 ft 3 in
Franklin	112 ft	113 ft	106 ft 5 in	114 ft 3 in	114 ft 6 in	112 ft

Discussion and Interpretation

The height of the grass definitely affected how far the ball went. Grass of 4 inches long average distance of about 120 feet. Grass of 3.5 inches went of an average of 126 feet but when the grass was super short with a height of one sixteenth inch the ball went of an average of 171 feet that is almost fifty extra feet!!'

The adidas ball went the furthest over all and the franklin ball performed the worst.



Conclusions and Ideas for Future Research

If you show up to a field with long grass the ball won't travel that far, but if the grass is really short be prepared because the ball going to sail. This can help me at soccer to know how hard I have to kick the ball to get it to go far enough. My future ideas are I am wondering if other Adidas balls work as good as mine or was it just chance? I could get a more expensive Adidas soccer ball to see if that would go farther. Does how much it cost matter? Does the newness of the ball matter? If the balls more broken in does that matter?