Soccer Anchor Papers

Student A

- **Based on the data provided for each student participating in the competition, which student won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student A won and the landing point isnt confirmed but by guessing and estamating im assumming it is the victor.

- **Justify your response with evidence to support your answer.**

By guessing and estamating it looks like it goes further than B and the landing point isnt 100% confirmed because the data doesnt show where it hits on the X-axis.

With only a few minutes left, a fourth student joined the competition.

Student D - Another group of students tracked the path of the ball kicked by Student D determined by the equation

$h(d) = -0.028d^2 + 2.52d + 2.9$ **(Track of Soccer Ball Kicked by Student D)**

which represents the path the ball took through the air, where d is the horizontal distance of the ball from the goal line and h is the vertical height of the ball from the ground. Both distances are measured in feet.

- **Considering this new information, which student really won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

In this one student D won and the ball went 91.136 Ft.

- **Provide evidence that proves that this student won.**

It has a greater distance than student A, B, C.

Student B

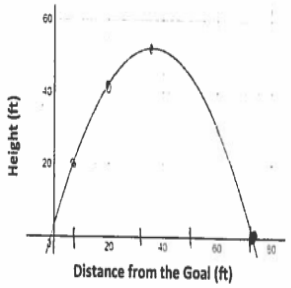
Student B - A group of students tracking the path of the ball kicked by Student B determined by the equation

$h(d) = -0.042d^2 + 3.36d + 8$ **(Track of Soccer Ball Kicked by Student B)**

which represents the path the ball took through the air, where d is the horizontal distance of the ball from the goal line and h is the vertical height of the ball from the ground. Both distances are measured in feet.

(82.314, 0)

Student C – A graph representing the path of the ball kicked by Student C is shown, where the horizontal distance of the ball from the goal line is represented on the x-axis and the height of the ball from the ground is represented on the y-axis.



Its between 60 and 80

- **Based on the data provided for each student participating in the competition, which student won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student B with (82.314, 0)

- **Justify your response with evidence to support your answer.**

Student A (81, 15.8)
Student B (82.314, 0)
Student C between 60 and 80

With only a few minutes left, a fourth student joined the competition.

Student D - Another group of students tracked the path of the ball kicked by Student D determined by the equation

$h(d) = -0.028d^2 + 2.52d + 2.9$ **(Track of Soccer Ball Kicked by Student D)**

which represents the path the ball took through the air, where d is the horizontal distance of the ball from the goal line and h is the vertical height of the ball from the ground. Both distances are measured in feet.

Student D (91.136, 0)

- **Considering this new information, which student really won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student D

- **Provide evidence that proves that this student won.**

91.136 is bigger than 82.314

Student D

- **Based on the data provided for each student participating in the competition, which student won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student A

- **Justify your response with evidence to support your answer.**

Student A	
H	V
2.3	8.1
12	29.2
28	51.6
43.3	58.6
62	48.2
73	31.9
81	15.8

Student B	
H	V
10	37.4
20	58.4
30	71
40	75.2
50	71
60	58.4
70	37.4
80	8

Student C	
H	V
10	30
20	42
30	50
40	50
50	45
60	30
70	7
80	X

Student A table was given.
Student B table from Desmos.
Student C table was estimated.
At a horizontal of 80 feet, Student A had the longest to go to reach the ground.

With only a few minutes left, a fourth student joined the competition.

Student D - Another group of students tracked the path of the ball kicked by Student D determined by the equation

$h(d) = -0.028d^2 + 2.52d + 2.9$ **(Track of Soccer Ball Kicked by Student D)**

which represents the path the ball took through the air, where d is the horizontal distance of the ball from the goal line and h is the vertical height of the ball from the ground. Both distances are measured in feet.

- **Considering this new information, which student really won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student D at about 91.4

- **Provide evidence that proves that this student won.**

Student D

H	V
10	25.3
20	42.1
30	53.3
40	58.9
50	58.9
60	53.3
70	42.1
80	25.3

H	V
90	2.9
91	.352 – About 0
92	-2.252

Student C

Student A - A motion detector was used to track the path of the ball and collected data for Student A while the soccer ball was in the air. The table of the data collected is shown below.

Track of Ball Kicked by Student A	
Horizontal Distance from the Goal Line (in feet)	Vertical Height (in feet)
2.3	8.1
12	29.2
28	51.6
43.3	58.6
62	48.2
73	31.9
81	15.8

a = -0.30
b = 2.60
c = 2.25

- **Based on the data provided for each student participating in the competition, which student won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student A won by (87.396, 0)

- **Justify your response with evidence to support your answer.**

I just type it in

With only a few minutes left, a fourth student joined the competition.

Student D - Another group of students tracked the path of the ball kicked by Student D determined by the equation

$h(d) = -0.028d^2 + 2.52d + 2.9$ **(Track of Soccer Ball Kicked by Student D)**

which represents the path the ball took through the air, where d is the horizontal distance of the ball from the goal line and h is the vertical height of the ball from the ground. Both distances are measured in feet.

- **Considering this new information, which student really won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student D they got (91.136, 0)

- **Provide evidence that proves that this student won.**

(On desmos app)
The app help me, I just typed it in and it gave me the answer.

Student E

Student A - A motion detector was used to track the path of the ball and collected data for Student A while the soccer ball was in the air. The table of the data collected is shown below.

Track of Ball Kicked by Student A	
Horizontal Distance from the Goal Line (in feet)	Vertical Height (in feet)
2.3	8.1
12	29.2
28	51.6
43.3	58.6
62	48.2
73	31.9
81	15.8

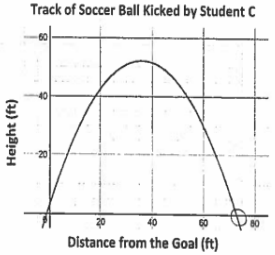
$Ax^2+Bx+C=y$

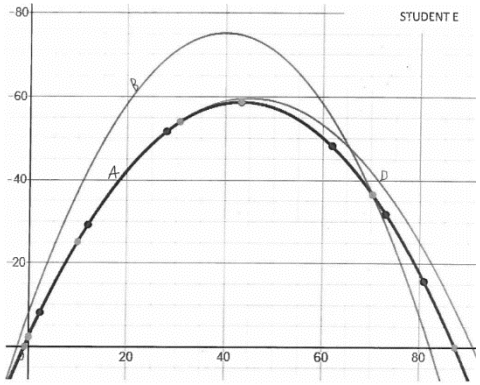
$y=Ax^2+Bx+C$

$y=-0.3x^2+2.6x+2.25$

Student C – A graph representing the path of the ball kicked by Student C is shown, where the horizontal distance of the ball from the goal line is represented on the x-axis and the height of the ball from the ground is represented on the y-axis.

$y=Ax^2+Bx+C$





- **Based on the data provided for each student participating in the competition, which student won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student A won the competition. $x > 81$ feet.

- **Justify your response with evidence to support your answer.**

I graphed both student A and B and looked at where they intercepted on the x-axis. Student B has a X intercept at 82.314 and Student A had a X-intercept at $X > 81$. Student C had a x-intercept above 60 and below 80. So Student A won.

- **Considering this new information, which student really won the competition AND at what horizontal distance from the goal line did the ball hit the ground?**

Student D won the competition, At 91.136 Feet.

- **Provide evidence that proves that this student won.**

Student D won because he/she had the furtherest distance from the field goal 91.136 feet.