

Problem 1

Circle Geometry Unit

Intersecting Chords of a Circle

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EB=1.97 cm AE=4.1 cm
DE=2.28 cm CE=3.54 cm

Drag any of the points on the circle and observe the changes in the measurements of the segments above.

Make a conjecture about the measurements for each chord and its segments. What might be the mathematical rule between the measurements?

[Teacher: Enter it below.]

Problem 2

EA·BE 5.8 ED·EC 5.8

Drag any of the points on the circle and observe the products of each chord's segments.

Now what can you conclude about the measurements for each chord and its segments.

[Teacher: Enter it below.]

Problem 3

On the next screen, there will be a circle whose chords you can manipulate and the values of the measurements for each chord's segments will be automatically captured into a spreadsheet.

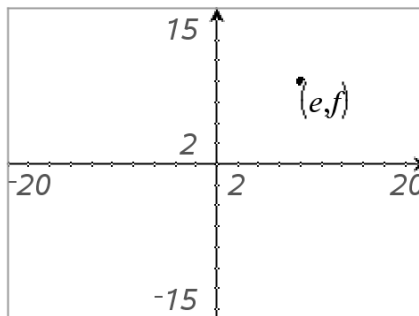
Explore columns E and F, which are the products of the segments for

EB=1.97 cm AE=4.1 cm
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	A a	B b	C c
1	4.1...	1.9...	2.2...
2			
3			
4			
5			
6			
A1		=4.10193112	

The data collected from the previous page will now be converted into a scatter plot.

Zoom Stat to get an appropriate window.



Question

What is the relationship between the product of the segments for each chord?

Answer 

On the next page, create a line of best fit for the data collected.

Use the Line tool from the Points & Lines Application.

Connect two points and then extend the line throughout the data points.

Using the Coordinate and Equations Tool, find the equation that fits the data collected.

Question

What was the equation of the best fit line?

Answer 

