

Inscribed Angles of Circles!

- 1) Go to <https://www.geogebra.org/m/PYD2XsGh>.
- 2) Plot a point anywhere on the **PINK ARC**. Right click on this point and check **Show Label**. (The label should be **D**. If it isn't, you can click **Rename** after right clicking and change its name to **D**.)
- 3) Construct **rays** \overrightarrow{DB} and \overrightarrow{DC} .
- 4) $\angle D$ is said to be an **inscribed angle** of a circle. Use GeoGebra to find and display the measure of this inscribed angle.
- 5) Now construct **rays** \overrightarrow{AB} and \overrightarrow{AC} .
- 6) Use GeoGebra to find and display the measure of this central angle you've just created.
- 7) Click on the **Move** tool now. Use this tool to change the locations of points D , B , and C . You can move the white point to change the circle's radius too (if you wish.)

Notice how the inscribed angle and the central angle both intercept the same blue arc.

Do you notice any relationship between the measure of the inscribed angle and central angle? Describe in detail:

- 8) Now, plot another point on the pink arc. Right click on this point and check Show Label (Make sure it's label is **E**.) Repeat steps (3) – (4), yet as you do, replace each occurrence of the letter **D** with the letter **E**.
- 9) Notice how inscribed angles D and E intercept the same blue arc. *How do their measures compare with each other? Describe what you see!*

