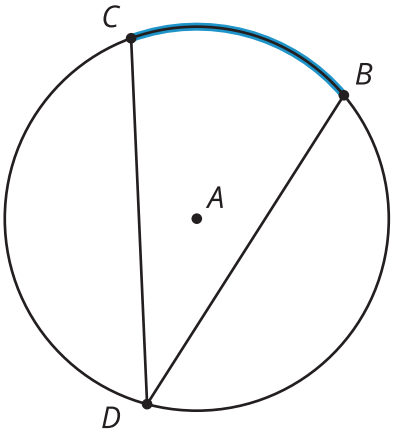
Unit 7 Lesson 2: Inscribed Angles

1 Notice and Wonder: A New Angle (Warm up)

Student Task Statement

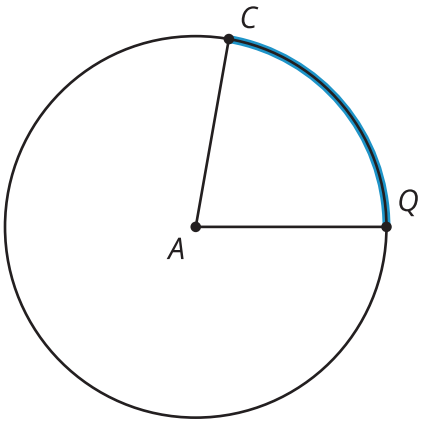
What do you notice? What do you wonder?



2 A Central Relationship

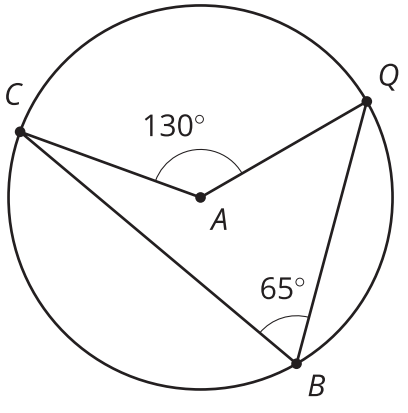
Student Task Statement

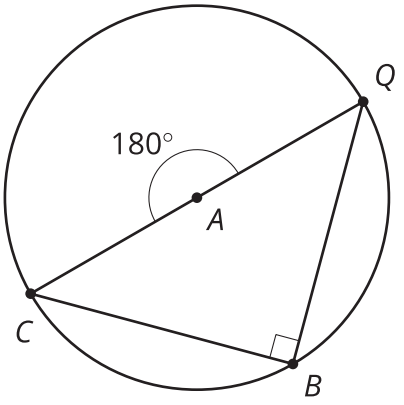
Here is a circle with central angle QAC.

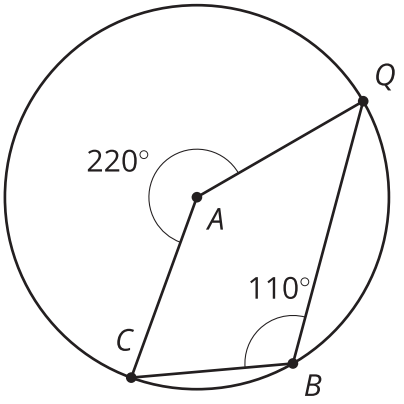


1. Use a protractor to find the approximate degree measure of angle QAC.
2. Mark a point B on the circle that is *not* on the highlighted arc from C to Q. Each member of your group should choose a different location for point B. Draw chords BC and BQ. Use a protractor to find the approximate degree measure of angle QBC.
3. Share your results with your group. What do you notice about your answers?
4. Make a conjecture about the relationship between an **inscribed angle** and the central angle that defines the same arc.

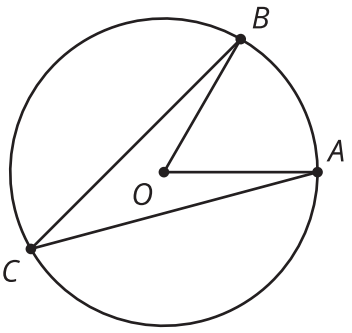
Activity Synthesis







$m\angle BCA = \frac{1}{2} m\angle BOA$

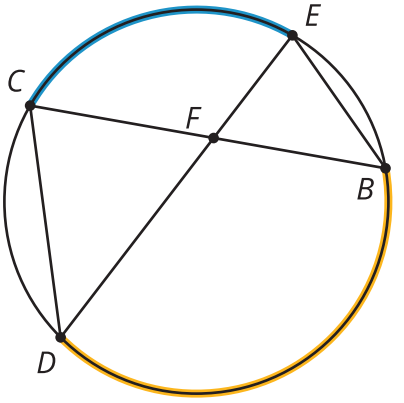


3 Similarity Returns

Student Task Statement

The image shows a circle with chords CD, CB, ED, and EB. The highlighted arc from point C to point E measures 100 degrees. The highlighted arc from point D to point B measures 140 degrees.

Prove that triangles CFD and EFB are similar.



Images for Activity Synthesis