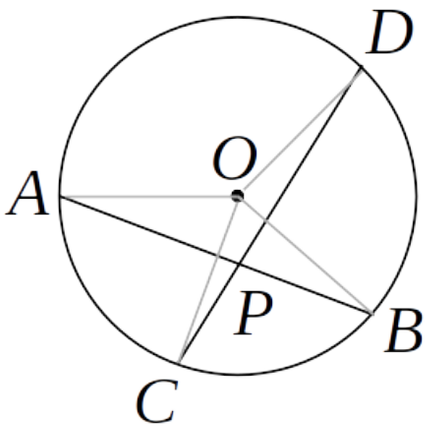
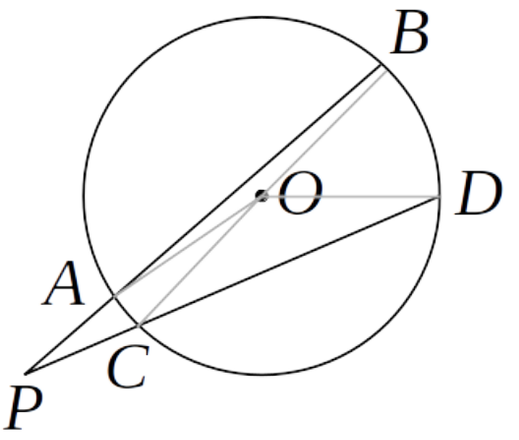
Mathematics 2260H – Geometry I: Euclidean Geometry

TRENT UNIVERSITY, Winter 2023

Assignment #6 – Chords and Angles

Due on Friday, 3 March.





1. Suppose AB and CD are different chords of a circle with centre O. Show that if (the extensions of) AB and CD intersect at some point P inside the circle, then $\angle APC = \frac{1}{2}(\angle BOD + \angle AOC)$. *[5]*

2. Suppose AB and CD are different chords of a circle with centre O. Show that if (the extensions of) AB and CD intersect at some point P outside the circle, then $\angle APC = \frac{1}{2}(\angle BOD - \angle AOC)$. *[5]*

HINT. We did the case where P is on the circle in class.