Chapter 12: Circles

Content Area: **Math**
Course(s): **Geometry CP, Geometry A, Geometry H**
Time Period: **Marking Period 3**
Length: **11 Days**
Status: **Published**

Unit Introduction

Standards

CCSS.Math.Content.HSG-C.A.1	Prove that all circles are similar.
CCSS.Math.Content.HSG-C.A.2	Identify and describe relationships among inscribed angles, radii, and chords.
CCSS.Math.Content.HSG-C.B.5	Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.

Essential Questions

- How can you prove relationships between angles and arcs in a circle?
- When lines intersect a circle or within a circle, how do you find the measures of resulting angles, arcs and segments?

Content

- 10.6 - Circles and Arcs (Arc Measure, Circumference, Arc Length)
- 12.1 - Tangent Circles
- 12.2 - Chords and Arcs
- 12.3 - Inscribed Angles
- 12.4 - Angle Measures and Segment Lenghts

Skills

- Construct inscribed angles, circumscribed angles, and regular polygons
- Find the circumference and arc length
- Find the lengths of segments associated with circles
- Find the measure of an angle formed by a tangent and a chord
- Find the measure of an inscribed angle
- Find the measures of angles formed by chords, secants, and tangents.
- Find the measures of central angles and arcs

- Recognize properties of lines through the center of a circle
- Use congruent chords, arcs, and central angles
- Use perpendicular bisectors to chords
- Use the relationship between a radius and a tangent
- Use the relationship between two tangents from one point