

10.0 Geometry: Circles

Skill/Task	Due	DN/ET Score	Plan for mastering this skill
10.1 Central Angles	5/10		
10.2 Inscribed Angles	5/11		
10.3 Congruent and Parallel Chords	5/12		
10.4 Intersecting Chord Angles	5/13		
10.5 Angles and Arcs with Intersecting Secants and Tangents	5/16		
10.6 Intersecting Chord Segments	5/17		
10.7 Chords and Diameters	5/18		
10.8 Tangents and Radii	5/19		
10.9 Segments with Intersecting Secants and Tangents	5/20		
10.10 Sector Area	5/20		
10 Group Test	5/20		

Score	
Plan	
Lesson	
Organization	
Total	

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Radians	$1 \text{ radian} = \frac{180}{\pi} \text{ degrees}$
Degrees	$1 \text{ degree} = \frac{\pi}{180} \text{ radians}$

Understand and apply theorems about circles.

- G-C.A.1** Prove² that all circles are similar.
- G-C.A.2** Identify and describe relationships among inscribed angles, radii, and chords. *Include³ the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*
- G-C.A.3** Construct the inscribed and circumscribed circles of a triangle, and prove² properties of angles for a quadrilateral inscribed in a circle.

Find arc lengths and areas of sectors of circles.

- G-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.

Translate between the geometric description and the equation for a conic section.

- G-GPE.A.1** Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.

Use coordinates to prove simple geometric theorems algebraically.

- G-GPE.B.4** Use coordinates to prove simple geometric theorems algebraically. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.*