Circle Theorems

Name: _____

Block:_____ Date: _____

Theorem	Sketch
<u>Circle Theorem #1</u> The measure of a central angle is the same as the degree measure of the arc it intercepts.	r° r°
<u>Circle Theorem #2</u> The measure of an inscribed angle in a circle is half the measure of the arc it intercepts.	$\frac{x^{\circ}}{2}$.
<u>Circle Theorem #3</u> Inscribed angles that intercept the same arc are congruent.	
Circle Theorem #4 Angles inscribed in a semicircle are right angles.	

Circle Theorem #5 The opposite angles of a quadrilateral inscribed in a circle are supplementary.	$a + c = 180^{\circ} \text{ and } b + d = 180^{\circ}$
Circle Theorem #6 A tangent to a circle is perpendicular to the radius drawn to the point of tangency.	Point of tangency
Circle Theorem #7 Tangent segments to a circle from a point outside the circle are congruent.	
Circle Theorem #8 Parallel lines intercept congruent arcs on a circle.	
<u>Circle Theorem #9 & #10</u> If two chords are congruent, then their arcs are congruent <u>Converse</u> : If two arcs are congruent, then their chords are congruent	AN . IN



