Secondary Math 2 Honors Name ______________________________

Quadrilaterals, Circles and Arcs – Key Concepts

Day 1 Polygon Angle Sums and Properties of Parallelograms

1. The sum of the measures of the _______________ angles of an *n*-gon is __________________. (See page 593)

2. The measure of each interior angle of a regular *n*-gon is __________________. (See page 594)

3. The sum of the measures of the _______________ angles of a polygon, one at each vertex, is _________. (See page 596)

4. If a quadrilateral is a _______________________, then:
   a. its opposite __________ are congruent (See page 600)
   b. its consecutive angles are ___________________ (See page 601)
   c. its opposite angles are _________________ (See page 602)
   d. its diagonals ____________ each other (See page 602)

5. The __________________ of each of the statements in #4 is also true. (See pages 610-612)

6. If one pair of opposite sides of a quadrilateral is both __________________ and __________________, then the quadrilateral is a ______________________. (See page 613)

Day 2 Properties of a Rhombus, Rectangle and Square

1. A ___________________ is a parallelogram with four congruent sides. (See page 619)

2. A ___________________ is a parallelogram with four right angles. (See page 619)

3. A ___________________ is a parallelogram with four congruent sides and four right angles. (See page 619)

4. Every square is also a ___________________ and a ___________________. (See page 620).

5. If a parallelogram is a _____________________, then:
   a. its diagonals are ________________________ (See page 621)
   b. each __________________ bisects a pair of opposite angles (See page 621)

6. If a parallelogram is a _____________________, then its __________________ are congruent. (See page 622)

7. The __________________ of the statements in #5 and #6 are also true. (See pages 628-629)

Day 3 Circles, Angles, Arcs and Area

1. A ______________ is the set of all points equidistant from a given point called the ____________. You ____________ a circle by its center. (See page 797)

2. A _________________ is a segment that contains the ______________ of a circle and has both endpoints on the ________________. A _________________ is a segment that has one endpoint at the _________________ and the other endpoint on the _________________. (See page 797)

3. A __________________________ is an angle whose __________________ is the center of the circle. (See page 797)

4. An _______ is part of a circle. One type of arc, a ____________________, is half of a circle. A ___________ arc is ________________ than a semicircle. A ___________ arc is ________________ than a semicircle. (See page 797)

5. You name a minor arc by its _______________________ and a major arc or a semicircle by its endpoints and another _______________ on the arc. (See page 797)

6. The __________________ of a minor arc is equal to the measure of its corresponding ___________________________. (See page 798)

7. The __________________________ of a circle is ___________ or ___________. The __________________ of an arc of a circle is ___________________. (See pages 800 and 802)

8. The _______________ of a circle is _________________. The area of a ________________ of a circle is ________________________. (See pages 807 and 809)

Day 4 Tangent Lines and Inscribed Angles

1. If a line is _________________ to a circle, then the line is __________________________ to the _________________ at the point of ___________________ and vice versa. (See pages 818 and 821)

2. If two tangent segments to a circle share a common ______________________ outside the circle, then the two segments are ___________________. (See page 823)

3. An _______________________________ is an angle whose _________________ is on the circle and whose sides are _________________ of the circle. (See page 839)

4. An _________________________________ is an arc with endpoints on the sides of the inscribed angle and its other points in the ____________________ of the angle. (See page 839)

5. The _______________________ of an inscribed angle is _____________ the measure of its intercepted arc. (See page 839)