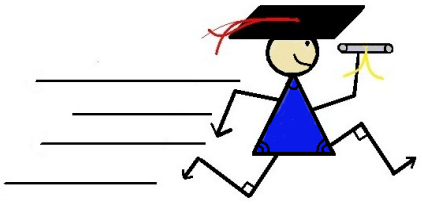
CIRCLE SMART CARD

Volume 7, Chapter 5



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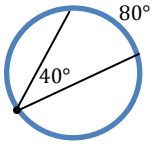
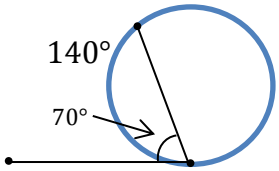
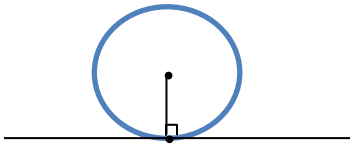
1. *The measure of an interior angle whose vertex is on a circle is equal to one half the intercepted arcs.*



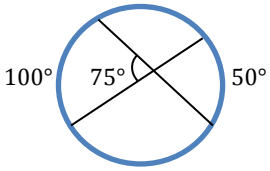
2. *The measure of an angle formed by a tangent and a chord drawn to the point of tangency is equal to one half the measure of the intercepted arc.*



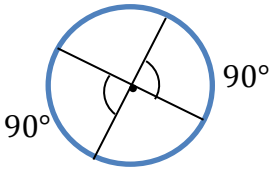
3. *A radius drawn to a point of tangency is perpendicular to the tangent.*



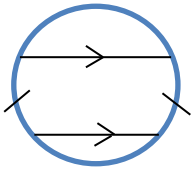
4. *The measure of an angle formed by two chords intersecting in the interior of a circle is equal to one half the sum of the measures of the two intercepted arcs.*



5. *In the same circle or congruent circles:*
   - *Congruent central angles intercept congruent arcs.*
   - *Congruent arcs have congruent central angles.*



6. *In a circle, parallel chords cut off equal arcs.*



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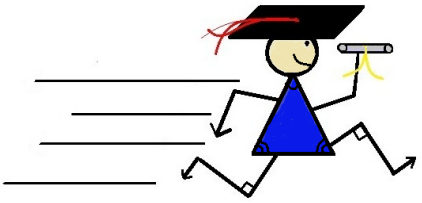
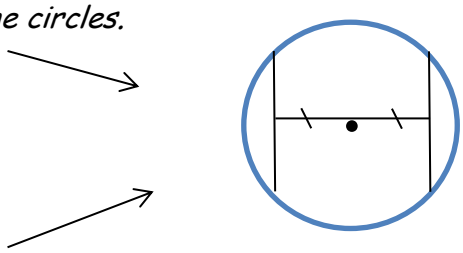
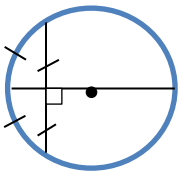


7. *In the same circle or in congruent circles, congruent chords are equidistant (the same distance) from the centers of the circles.*

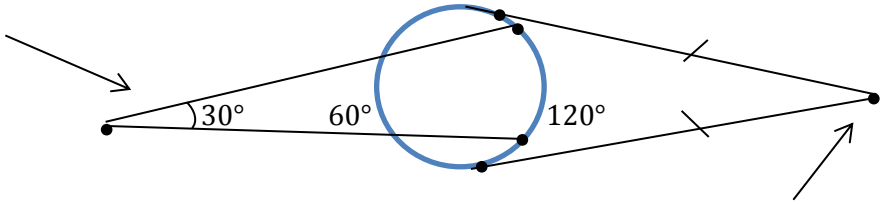


8. *In the same circle or congruent circles, chords equidistant from the centers of the circles are congruent.*

9. *In a circle, a diameter drawn perpendicular to a chord bisects the chord and its arcs.*



10. *The measure of an angle formed by two secants, a secant and a tangent, or two tangents intersecting in the exterior of a circle is equal to one half the difference of the measures of the intercepted arcs.*



11. *If two tangent segments are drawn to a circle from the same exterior point, then they are congruent.*

12. *If two secant segments are drawn to a circle from the same exterior point, then the product of the lengths of one secant segment and its external segment is equal to the product of the lengths of the other secant segment and its external segment.*

13. *If a tangent segment and a secant segment are drawn to a circle from the same exterior point, then the square of the length of the tangent segment is equal to the product of the lengths of the secant segment and its external segment.*

FORMULAS

$$\frac{Length\ of\ arc}{Circumference} = \frac{Degree\ measure\ of\ arc}{360°}$$

$$\frac{Area\ of\ sector}{Area\ of\ circle} = \frac{degree\ measure\ of\ sector\ arc}{360°}$$

$V = lwh$ $V = s^3$ $V = area\ of\ base(h)$ $V = \pi r^2 h$ $V = \frac{1}{3}\pi r^2 h$ $V = \frac{4}{3}\pi r^3$