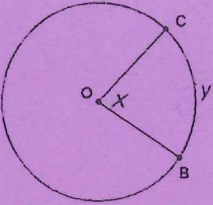
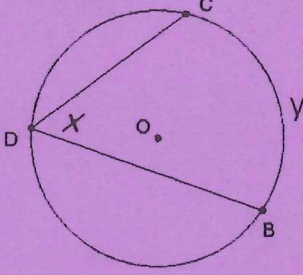
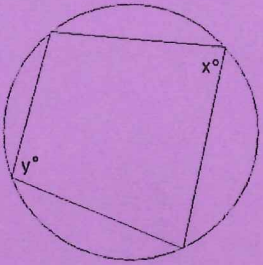
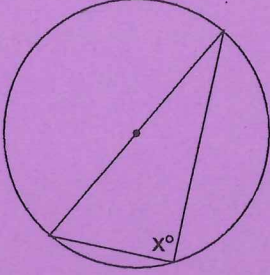
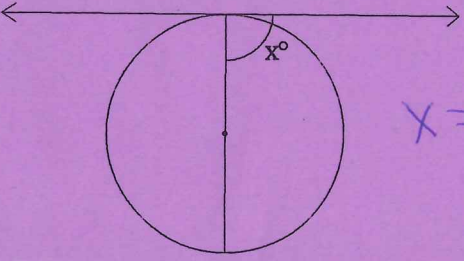
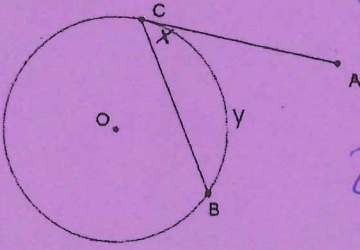
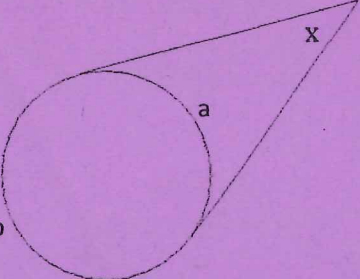
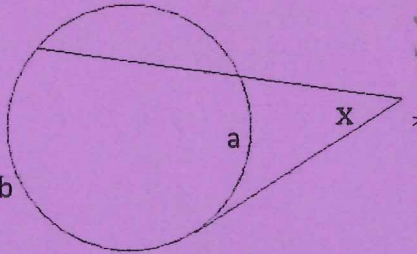
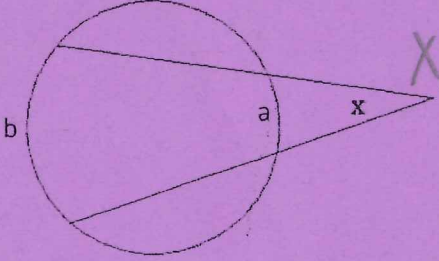
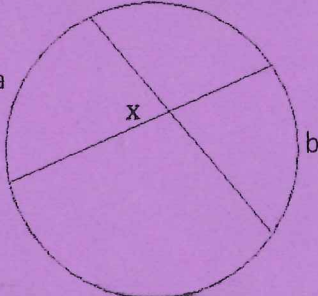


Angles and arcs

Key

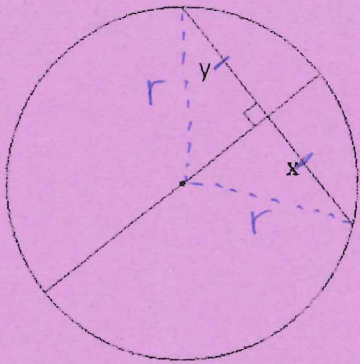
Circle Toolkit – For each angle and arc relationship, complete the example by solving for the variable(s).

<p>Central angle</p>  <p>$x = y$</p>	<p>Inscribed angle</p>  <p>$x = \frac{1}{2}y$ OR $2x = y$</p>
<p>Angles of inscribed quadrilateral</p>  <p>$x + y = 180$</p>	<p>Inscribed angle of a semicircle</p>  <p>$x = 90^\circ$</p>
<p>Diameter drawn to tangent at point of tangency</p>  <p>$x = 90^\circ$</p>	<p>Angle formed by secant/chord drawn to tangent at point of tangency</p>  <p>$x = \frac{1}{2}y$ OR $2x = y$</p>
<p>Angle formed by two tangents (outside circle)</p>  <p>$a = 180 - x$ $b = 180 + x$</p>	<p>Angle formed by secant and tangent (outside circle)</p>  <p>$x = \frac{b-a}{2}$</p>
<p>Angle formed by two secants (outside circle)</p>  <p>$x = \frac{b-a}{2}$</p>	<p>Angle formed by intersecting chords (inside circle)</p>  <p>$x = \frac{a+b}{2}$</p>

EQUATIONS

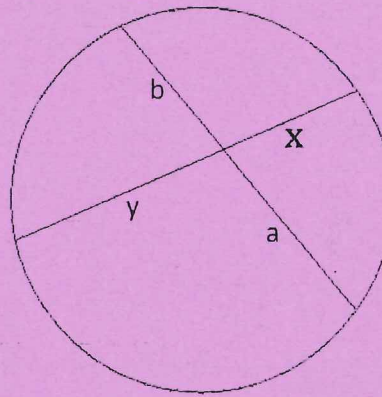
Segments

Diameter Perpendicular to a Chord



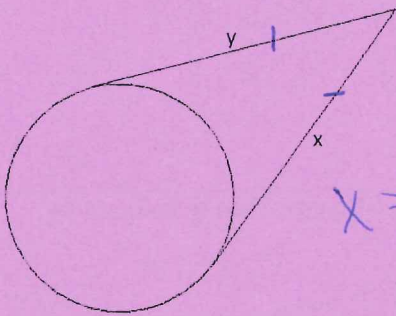
$x = y$

Length of Segments of Intersecting Chords



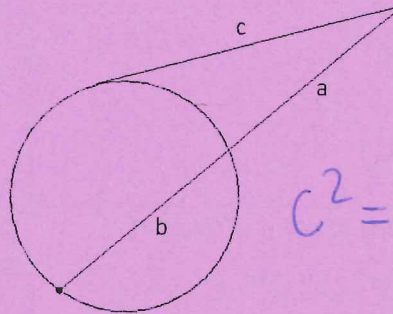
$a(b) = x(y)$

Length of Tangent Segments



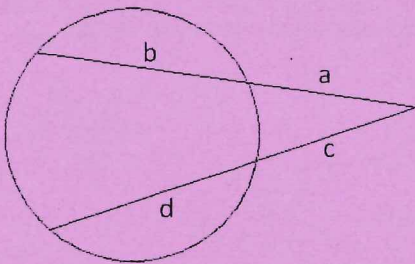
$x = y$

Length of Segments of Intersecting Tangent & Secant



$c^2 = a(a+b)$

Length of Segments of Intersecting Secant & Secant



$a(a+b) = c(c+d)$

BE SURE YOU KNOW THE VOCABULARY FROM THIS CHAPTER!!

- | | |
|---------------|-------------------|
| Arc | Intercepted Arc |
| Major Arc | Arc Length |
| Central Angle | Measure of an Arc |
| Chord | Minor Arc |
| Diameter | Secant |
| Semicircle | Inscribed Angle |
| Tangent | Inscribed Polygon |

Equation of a circle: $(x-h)^2 + (y-k)^2 = r^2$