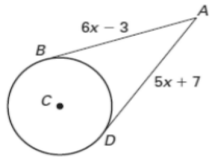
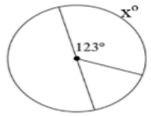
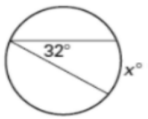
EXAMPLE	RULE	WORKED OUT
	2 tangent segments are congruent when they are joined at a common exterior point. Tangent = Tangent	$6x-3=5x+7$ $-5x \quad -5x$ $x-3=7$ $+3 \quad +3$ $x=10$
	A central angle is equal to the intercepted arc. Central Angle = Arc	$x=123°$
	An inscribed angle is ½ the intercepted arc. Arc = 2(Angle) Angle = $\frac{\text{Arc}}{2}$	$x=32(2)$ $=64°$

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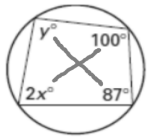
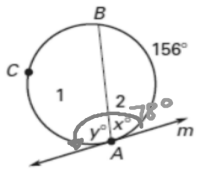
	If inscribed angles intercept the same arc, they are congruent. Angle = Angle	$5x-2=4x+9$ $-4x \quad -4x$ $x-2=9$ $+2 \quad +2$ $x=11$
	When a quadrilateral is inscribed in a circle, opposite angles are supplementary (add up to 180). Opp Angle + Opp Angle = 180	$y+87=180$ $-87 \quad -87$ $y=93°$ $2x+100=18$ $-100 \quad -10$ $\frac{2x}{2}=\frac{80}{2}$ $x=40$
	If a chord and a tangent intersect on the circle, the measure of the angle is ½ the measure of the intercepted arc. Arc = 2(Angle) Angle = $\frac{\text{Arc}}{2}$	$x=\frac{156}{2}=78°$ $y=180-78=102°$

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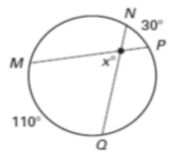
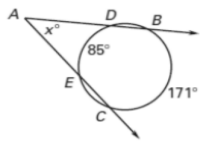
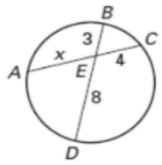
	If 2 chords intersect inside a circle, then the measure of each angle is ½ the sum of the measures of the arcs intercepted by the angle and its vertical angle. $\frac{\text{Arc} + \text{Arc}}{2}$ = Inside Angle	$\frac{110+30}{2}=x$ $\frac{140}{2}=x$ $70°=x$
	If a tangent and a secant, 2 tangents, or 2 secants intersect in the exterior of a circle, the measure of the angle formed is ½ the difference of the measures of the intercepted arcs. $\frac{\text{Big Arc} - \text{Little Arc}}{2}$ = Ext Angle	$\frac{171-85}{2}=x$ $\frac{86}{2}=x$ $43°=x$
	If 2 chords intersect in the interior of a circle then the product of each chord is congruent to the other. Chord 1 Part · Part = Chord 2 Part · Part	$3 \cdot 8 = 4 \cdot x$ $\frac{24}{4}=\frac{4x}{4}$ $x=6$

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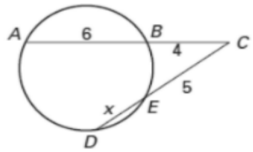
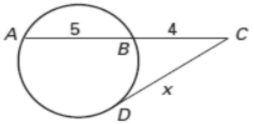
	2 secant segments share the same exterior endpoint, then the product of the length of 1 secant segment and the length of its external segment = the product of the length of the other secant segment and the length of its external segment. Secant 1 Outside(whole) = Secant 2 Outside(whole)	$4(4+6)=5(x+5)$ $4(10)=5x+25$ $40=5x+25$ $-25 \quad -25$ $\frac{15}{5}=\frac{5x}{5}$ $x=3$
	A secant segment and a tangent segment share an exterior endpoint, then the product of the length of the secant segment & its external segment equals the square of the tangent segment length. Secant Outside(whole) = Tangent Outside(Outside)	$4(4+5)=x(x)$ $4(9)=x^2$ $36=x^2$ $\sqrt{36}=x$ $x=6$

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