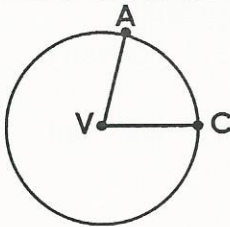
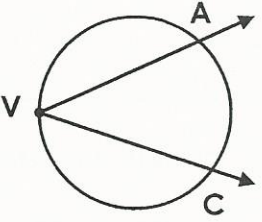
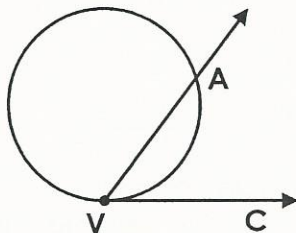
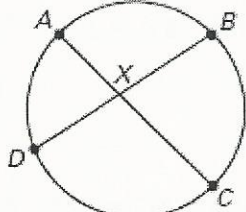
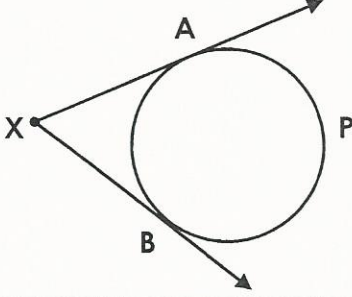
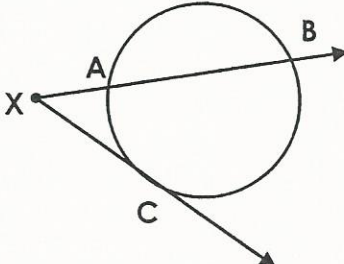
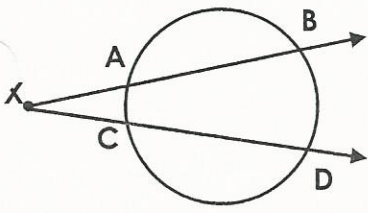
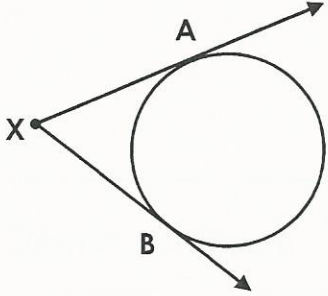
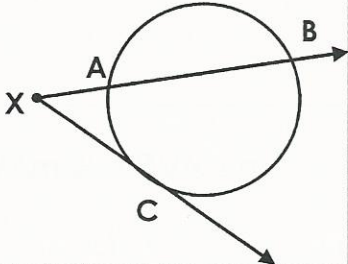
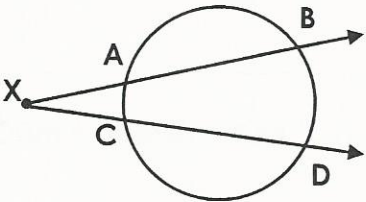
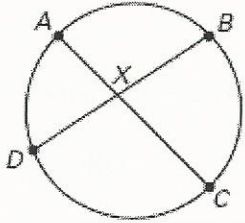


Summary of Angle-Arc Relationships

Diagram	Location of Vertex	Sides of Angle	Formula
	Center of Circle	<i>Central Angle:</i> sides are formed by 2 radii	$m\angle AVC = m\widehat{AC}$
	On the Circle	<i>Inscribed Angle:</i> sides are formed by 2 secants or chords	$m\angle AVC = \frac{1}{2} m\widehat{AC}$
	On the circle	sides are formed by a secant and tangent	$m\angle AVC = \frac{1}{2} m\widehat{AV}$
	In the circle	sides are formed by 2 secants or chords	$m\angle AXB = \frac{1}{2}(m\widehat{AB} + m\widehat{DC})$
	Outside the Circle	sides are formed by 2 tangents	$m\angle AXB = \frac{1}{2}(m\widehat{APB} - m\widehat{AB})$ OR $m\widehat{APB} - 180^\circ$
	Outside the Circle	sides are formed by a secant and tangent	$m\angle AXC = \frac{1}{2}(m\widehat{BC} - m\widehat{AC})$
	Outside the Circle	sides are formed by 2 secants	$m\angle AXC = \frac{1}{2}(m\widehat{BD} - m\widehat{AC})$

Summary of Secants, Tangents, and Chords Segment Relationships

Diagram	Location of Vertex	Types of Segments	Formula
	Outside of Circle	2 tangents	$AX = BX$
	Outside of Circle	1 secant segment and 1 tangent segment	whole · outside = tangent ² $XB \cdot XA = XC^2$
	Outside of Circle	2 secants	whole · outside = whole · outside $XB \cdot XA = XD \cdot XC$
	Inside of Circle	2 chords	$AX \cdot XC = DX \cdot XB$