
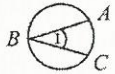

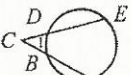
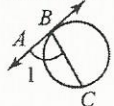
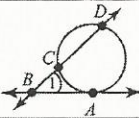
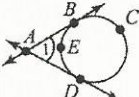


### Properties of Circles

TYPE OF ANGLE	DIAGRAM	ANGLE RELATIONSHIPS	SEGMENT RELATIONSHIPS
central angle		$m\angle 1 = m\widehat{AB}$ O is the center of the circle (Definition of measure of arc)	$OA = OB$
inscribed angle		$m\angle 1 = \frac{1}{2} m\widehat{AC}$ vertex on circle (Theorem 6.2)	no segment relationship
angles formed by intersecting chords		$m\angle 1 = \frac{1}{2}(m\widehat{AB} + m\widehat{CD})$ vertex inside circle (Theorem 6.5)	$(AE)(EC) = (BE)(ED)$ (Theorem 6.13)
angle formed by two secants		$m\angle 1 = \frac{1}{2}(m\widehat{AE} - m\widehat{BD})$ vertex outside circle (Theorem 6.14)	$(CA)(CB) = (CE)(CD)$ (Theorem 6.15)
angle formed by tangent and a chord		$m\angle 1 = \frac{1}{2}(m\widehat{BC})$ vertex on circle (Theorem 6.16)	no segment relationship
angle formed by secant and tangent		$m\angle 1 = \frac{1}{2}(m\widehat{AD} - m\widehat{AC})$ vertex outside circle (Theorem 6.17)	$\frac{BD}{AB} = \frac{AB}{BC}$ (Theorem 6.20)
angle formed by two tangents		$m\angle 1 = \frac{1}{2}(m\widehat{BCD} - m\widehat{BED})$ vertex outside circle (Theorem 6.18)	$AB = AD$ (Theorem 6.19)