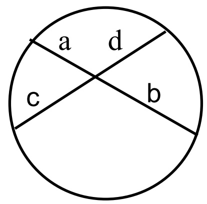
Theorem **When two chords intersect within a circle, the product of the lengths of the segments of one chord is equal to the product of the lengths of the other chord.**

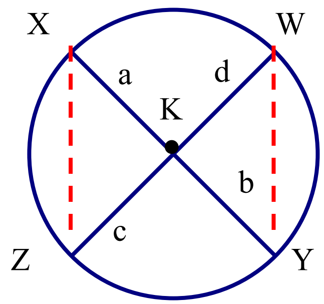


ab = cd

Let's look at the proof

Given: Chords $\overline{XY}$ & $\overline{ZW}$

Prove: a • b = c • d



	Statements	Reasons
1.	Draw $\overline{XZ}$ and $\overline{WY}$	Construction
2.	∠X ≅ ∠W ∠Z ≅ ∠Y	Inscribed ∠'s intercept same arc
3.	∠XKZ and ∠YKW are Vert ∠	Def. Vertical ∠
4.	Δ XKZ ~ Δ WKY	AA Postulate
5.	$\frac{a}{d} = \frac{c}{b}$	~ Δ's proportion
6.	ab = cd	Prop of Proportion