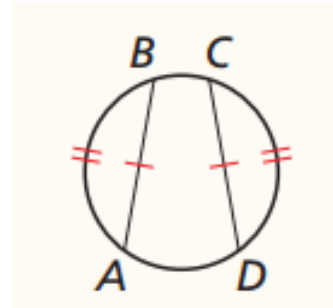


Congruent Corresponding Chords Theorem

In the same circle, or in congruent circles, two minor arcs are congruent if and only if their corresponding chords are congruent.

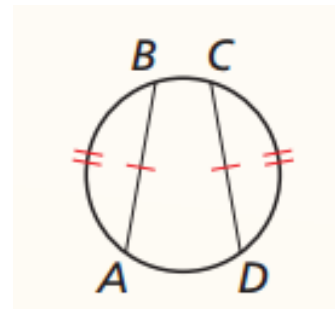
PROOF: **Since this is a biconditional statement, we need to prove BOTH “ $p \rightarrow q$ ” and “ $q \rightarrow p$ ”

“ $q \rightarrow p$ ” If two chords are congruent in the same circle or two congruent circles, then the corresponding minor arcs are congruent.



Statements	Reasons
$\overline{AB} \cong \overline{CD}$	Given
Say O is the center of the circle. Draw $\overline{AO}$, $\overline{BO}$, $\overline{CO}$ and $\overline{DO}$	Through any two points there is one line
$\overline{AO} \cong \overline{BO} \cong \overline{CO} \cong \overline{DO}$	Radii in the same circle are congruent
$\triangle AOB \cong \triangle COD$	SSS $\cong$
$\angle AOB \cong \angle COD$	CPCTC
$\widehat{AB} \cong \widehat{CD}$	Congruent Central Angles Theorem

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