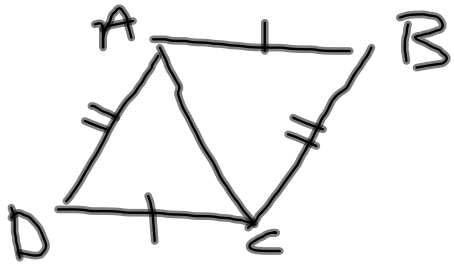
4.4 SSS & SAS

Side-Side-Side: if 3 sides of a triangle are $\cong$ to 3 sides of another triangle, then the triangles are congruent.

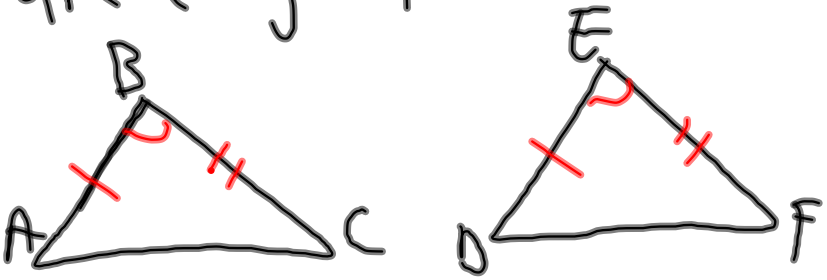
Ex: Use SSS to explain why $\triangle ABC$ is $\cong$ to $\triangle CDA$.



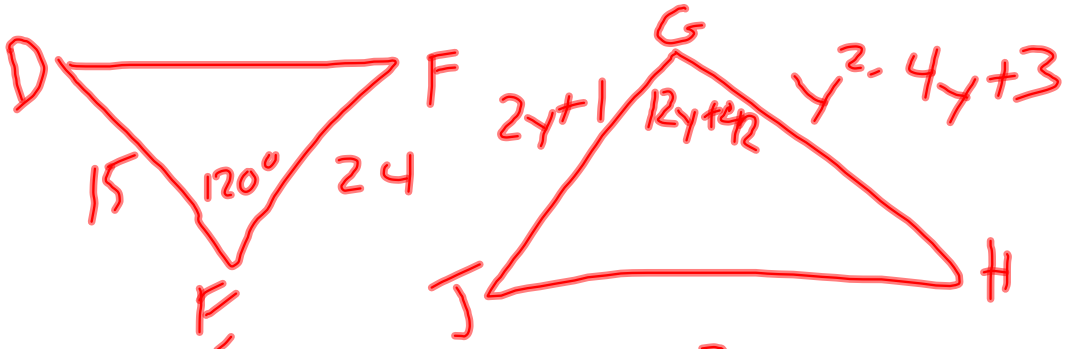
Statement	Reasons
1. $\overline{AB} \cong \overline{CD}$	1. Given
2. $\overline{DA} \cong \overline{CB}$	2. Given
3. $\overline{AC} \cong \overline{AC}$	3. Ref. prop of $\cong$.
4. $\triangle ABC \cong \triangle CDA$	4. SSS

Side Angle Side

If 2 sides and the included angle of a triangle are $\cong$ to 2 sides and the included angle of another triangle, then the triangles are congruent.



Ex: Show $\triangle DEF \cong \triangle JGH$ when $y = 7$.



$JG = 2y + 1$
$= 2(7) + 1$
$= 15$ ✓

$GH = y^2 - 4y + 3$
$= (7)^2 - 4(7) + 3$
$= 24$

$m\angle 6 = 12y + 42$
$= 12(7) + 42$
$= 84 + 42$
$= 126$

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