

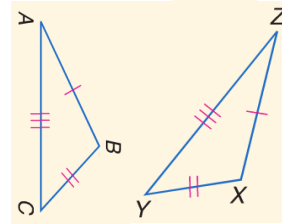
4 - 4

SSS and SAS

SSS

Side, Side, Side

If three sides of one triangle are congruent to three sides of another triangle, then the two triangles are congruent by SSS.

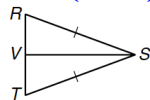


PROOF - SAMPLE(SSS)

Given: $\overline{RS} \cong \overline{TS}$

V is the midpoint of \overline{RT} .

Prove: $\triangle RSV \cong \triangle TSV$

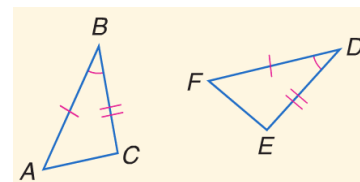


STATEMENTS	REASONS
1) V is the midpoint of RT; $RS \cong TS$	1) Given
2) $RV \cong TV$	2) Def. of Midpoint
3) $VS \cong VS$	3) Reflexive Prop.
4) $\triangle RSV \cong \triangle TSV$	4) SSS

SAS

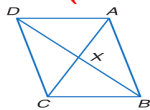
Side, Angle(Included), Side

If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the two triangles are congruent by SAS.



PROOF - SAMPLE(SAS)

Given: X is the midpoint of \overline{BD} .
 X is the midpoint of \overline{AC} .



Prove: $\triangle DXC \cong \triangle BXA$

STATEMENTS	REASONS
1) X is the midpoint of BD X is the midpoint of AC	1) Given
2) $DX \cong XB$ $AX \cong XC$	2) Def of Midpoint
3) $\angle DXC \cong \angle BXA$	3) Vertical Angles
4) $\triangle DXC \cong \triangle BXA$	4) SAS