Reviewing SSS, SAS, ASA,and AAS

Proving Triangles Congruent

SSS – SIDE SIDE SIDE

SAS – SIDE ANGLE SIDE

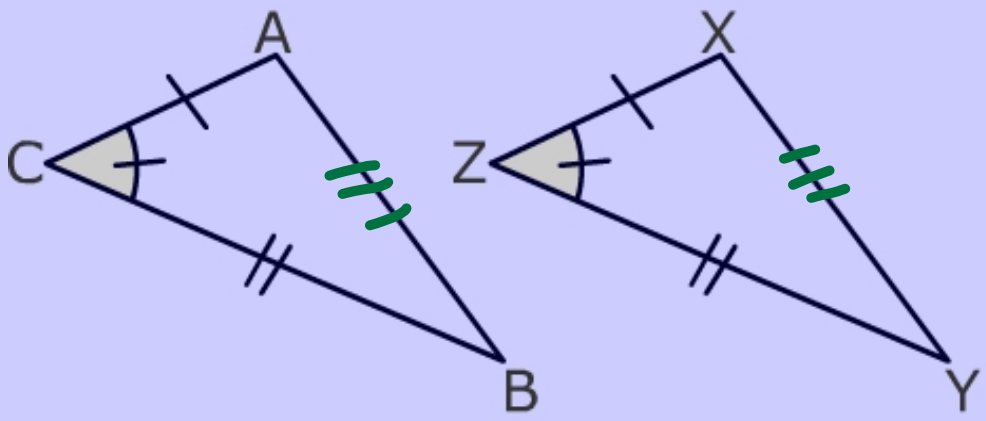
AAS – ANGLE ANGLE SIDE

ASA – ANGLE SIDE ANGLE

** ALL RIGHT ANGLES ARE CONGRUENT

Why are they congruent?

By SAS, $\triangle ABC \cong \triangle XYZ$

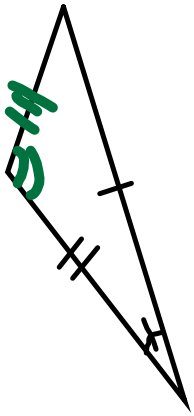


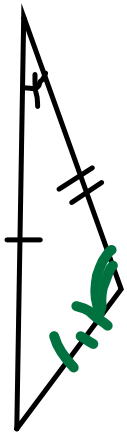
What _____postulate can be used to prove the triangles are congruent?

ASA

SSS

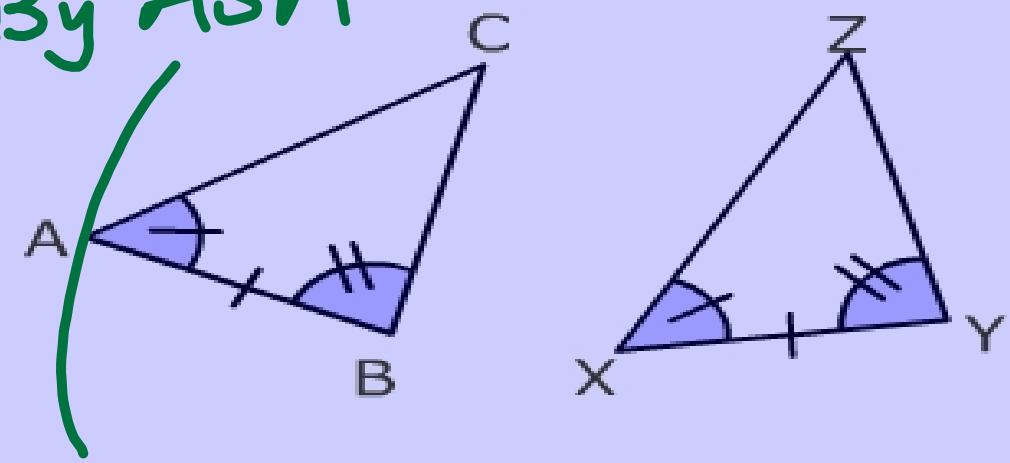
SAS





Why are they congruent?

By ASA



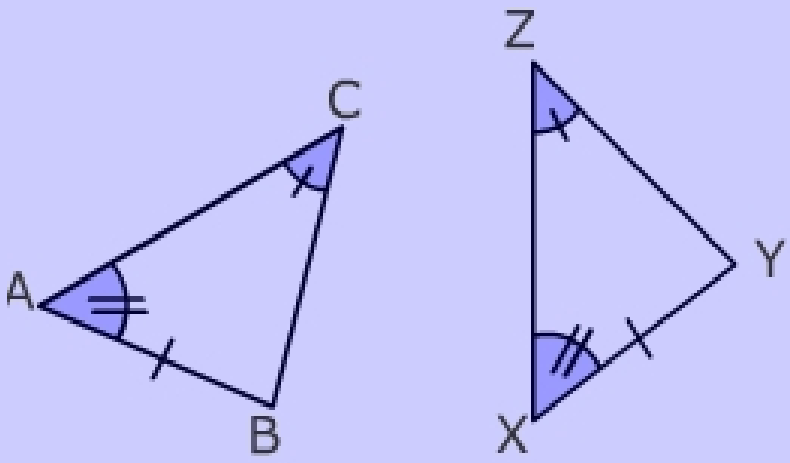
$\triangle ABC \cong \triangle XYZ$

What _____postulate can be used to prove the triangles are congruent?

SAS

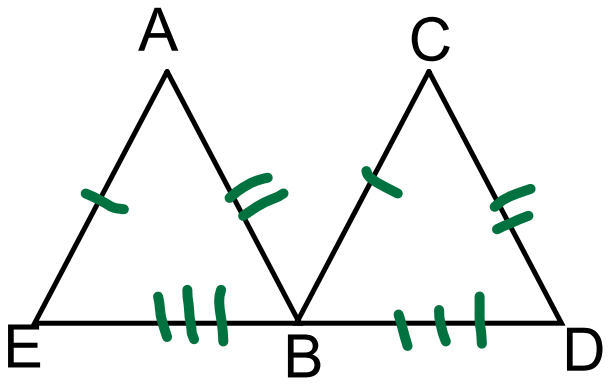
SSS

AAS



Given: AE ≅ CB,

AB≅CD, and B is the midpoint of ED



Prove:

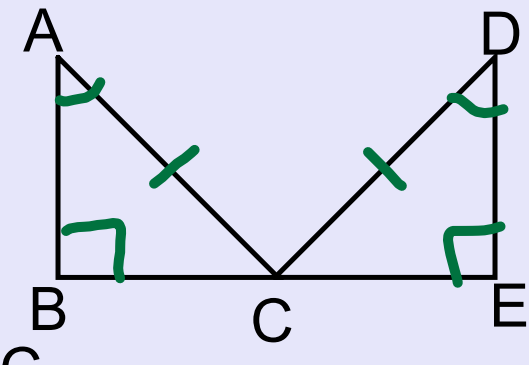
Statements	Reasons
AE ≅ CB, AB≅CD, B is the midpoint of ED	Given
EB ≅ DB	Def^n of Midpoint
△ AEB ≅ △ CBD	SSS

Given: $AB \perp BE$, $DE \perp BE$

$AC \cong DC$, $\angle BAC \cong \angle EDC$

Prove:

$\triangle ABC \cong \triangle DEC$

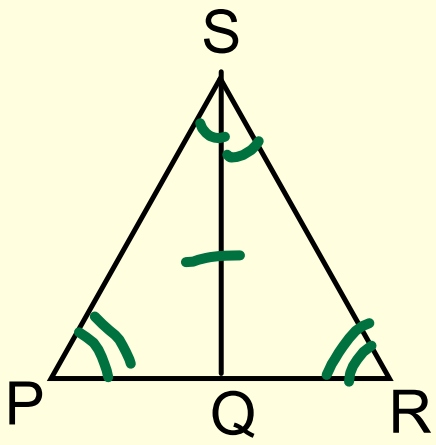


Statements	Reasons
$AB \perp BE$, $DE \perp BE$	Given
$AC \cong DC$, $\angle BAC \cong \angle EDC$	$AB \perp BE$, $DE \perp BE$
$\angle B$ and $\angle E$ are rt $\angle$'s	All right $\angle$'s are congruent
$\angle B \cong \angle E$	AAS
$\triangle ABC \cong \triangle DEC$	

Given: SQ bisects <PSR

<P ≅ <R

Prove: △ SQP ≅ △ SQR



Statements SQ bisects <PSR	Reasons
1. <P ≅ <R	1. Given
2. ∠PSQ ≅ ∠RSQ	2. Definition of Bisector
3. $\overline{SQ} \cong \overline{SQ}$	3. Reflexive Property
4. △ SQP ≅ △ SQR	4. SAA