

## 5.6 ASA and AAS Congruence

### Geometry 5.6 ASA & AAS Congruence.

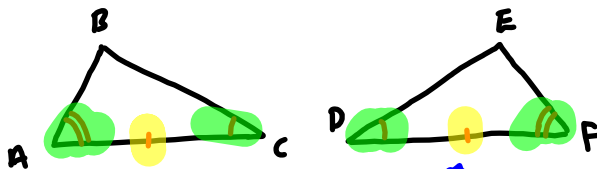
Angle Side Angle.

Has to be an "Included Side"

Between the 2 Angles.

2  $\Delta$ 's are congruent if they have 2 congruent angles and the included side is also congruent.

Ex:



are the  $\Delta$ 's Congruent?

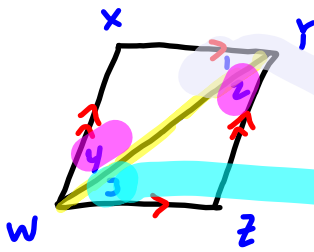
Yes, by ASA.

The side is included

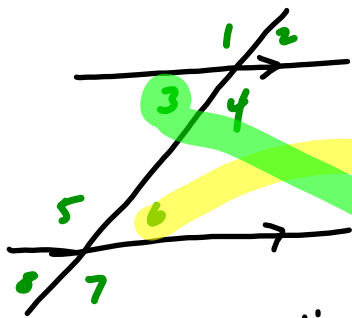
The sides are between the Angles.

# 5.6 ASA and AAS Congruence

Ex:



Are the 2  $\Delta$ s congruent?



Looking at a comparison, angle 6  $\hat{=}$   $\angle 3$ .

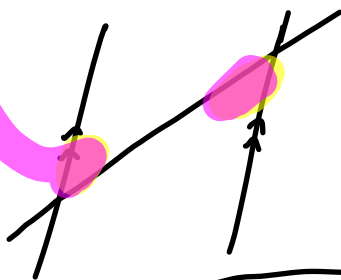
angle 3 matches  $\angle 1$ .

What kind of Angle pair is 3 & 6?

Alternate interior Angles.

so  $\angle 1 \hat{=}$   $\angle 3$  are congruent.

You can do the same thing to show  $\angle 2 \hat{=}$   $\angle 4$  are congruent.



Also Alternate interior Angles.

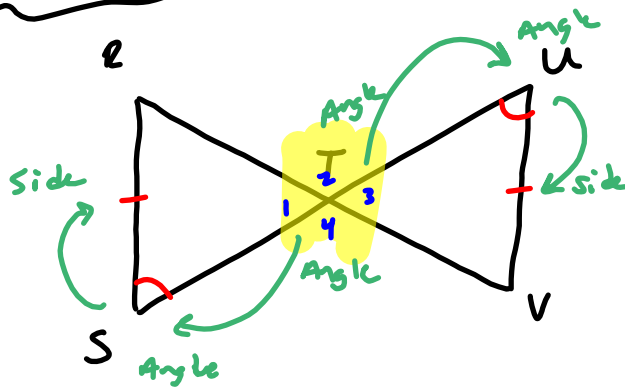
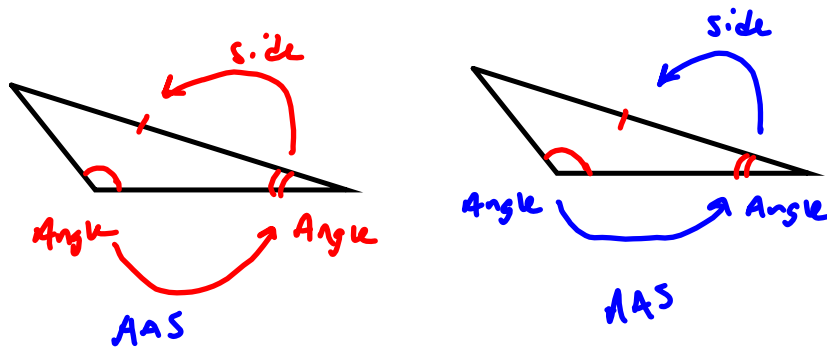
So  $\Delta XYW \cong \Delta ZWY$



## 5.6 ASA and AAS Congruence

AAS Congruence.

Ex: These 2  $\Delta$ s are congruent through AAS.



Ex: Are the 2  $\Delta$ s congruent?

$\angle 1$  &  $\angle 3$  are Vertical Angle Pairs. So they are congruent.

Congruence Statement!

$$\Delta RST \cong \Delta VUT$$

So in total we have

SAS, SSS, HL, ASA, and AAS.

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HW: Pg 248

#s 3-6, 9-12