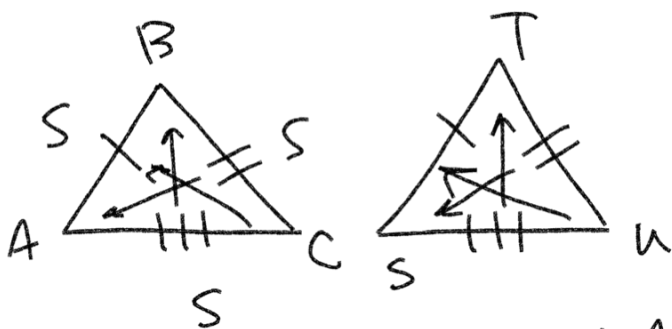
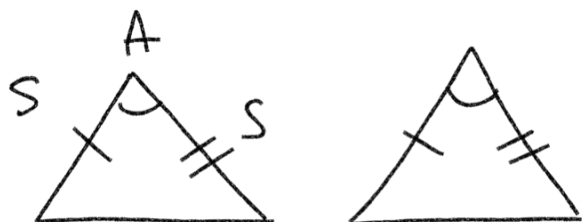


AAA similarity,
not a congruency



$$\triangle ABC \cong \triangle STU$$

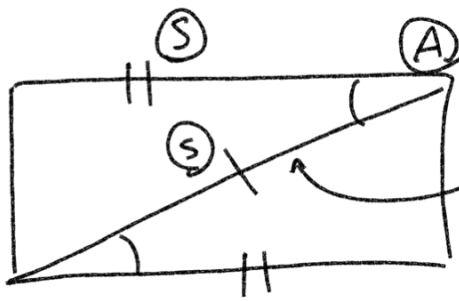
side-side-side
congruency



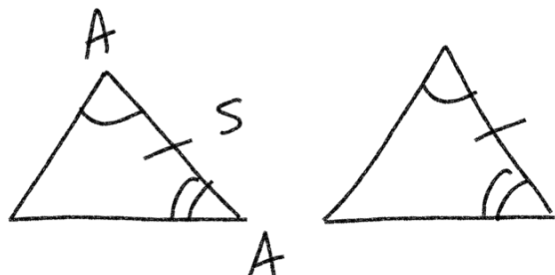
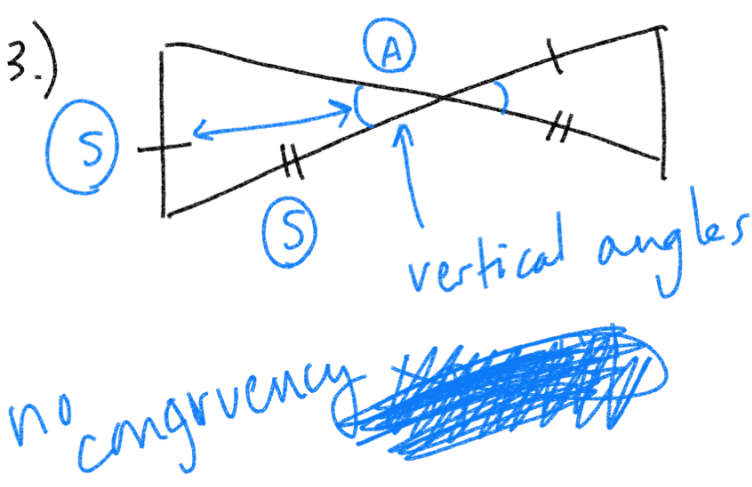
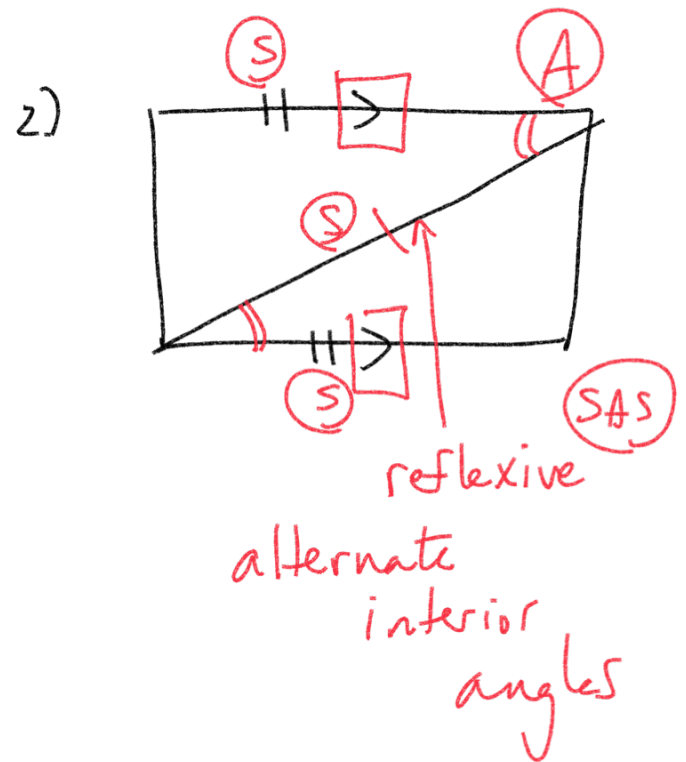
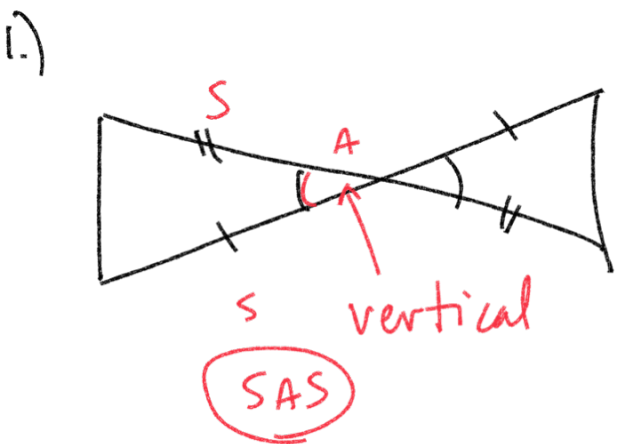
side-angle-side

Two Requirements for
Triangle Congruency

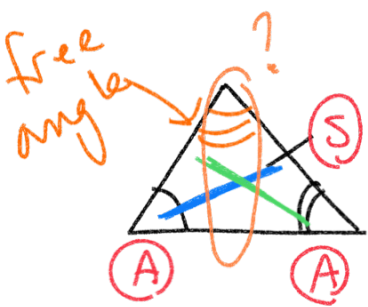
- 1.) You must have one representative from each angle-side pair.
(Letter)
- 2.) Must have at least one congruent side



reflexive property
SAS

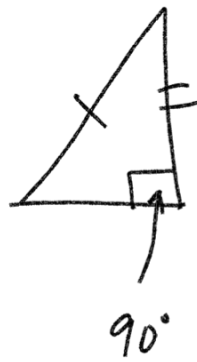


Angle-side-Angle



if you have 2 angles, you have 3.

AAS
angle-angle-side
is like ASA congruency



Right Triangles

HL

hypotenuse - leg

Behaves like SSS
why?

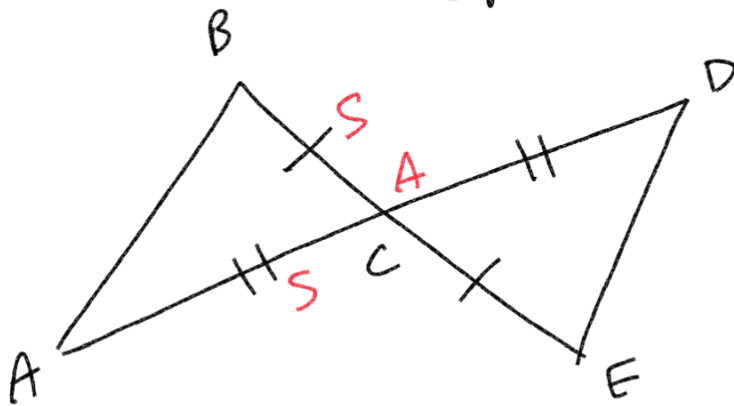
Pythagorean Theorem

$$a^2 + b^2 = c^2$$

Cool pants can train cats.

Corresponding Parts of Congruent
Triangle are Congruent

CPCCTC



Given:

$$\overline{BC} \cong \overline{CE}$$

$$\overline{AC} \cong \overline{CD}$$

Prove:

$$\overline{AB} \cong \overline{DE}$$

Reasons

Given

Given

vertical
angles

SAS

CPCCTC

reflexive
alt interior
vertical

Statement

$$\overline{BC} \cong \overline{CE}$$

$$\overline{AC} \cong \overline{CD}$$

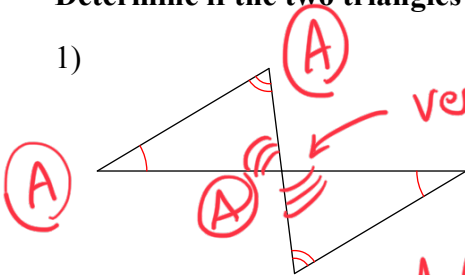
$$\angle BCA \cong \angle ECD$$

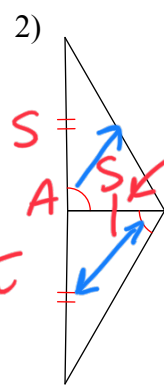
$$\triangle BCA \cong \triangle ECD$$

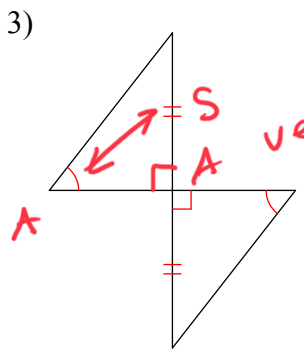
$$\overline{AB} \cong \overline{DE}$$

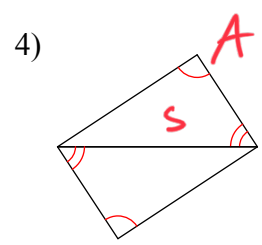
Assignment

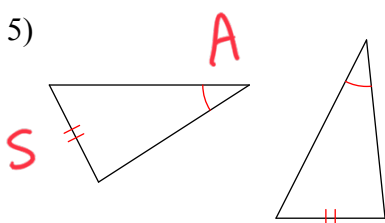
Determine if the two triangles are congruent. If they are, state how you know.

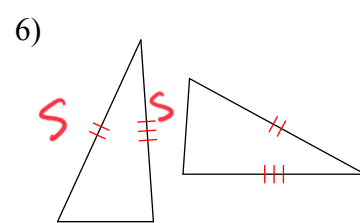
1) 
 vertical angle
 AAA
 not congruent

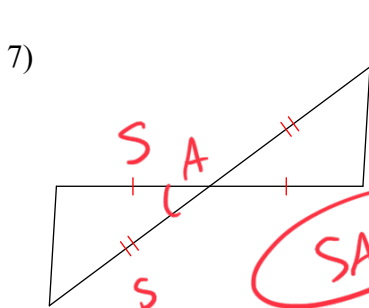
2) 
 reflexive side
not congruent

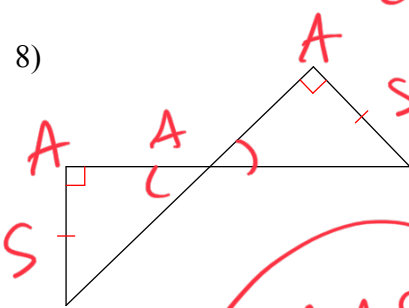
3) 
 vertical
 AAS

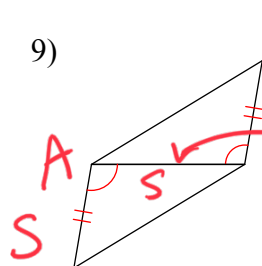
4) 
 reflexive
 AAS

5) 
 not congruent

6) 
 not congruent

7) 
 vertical
 SAS

8) 
 vertical
 AAS

9) 
 Reflexive
 Reflexive
 Alt. Int.
 Vertical
 SAS