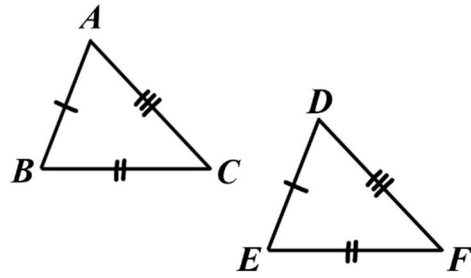
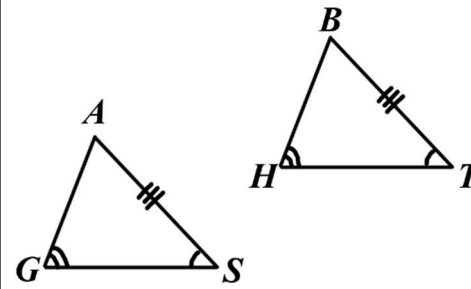


If all three _____ of one triangle are _____ to all three _____ of another triangle, then the two triangles are _____.



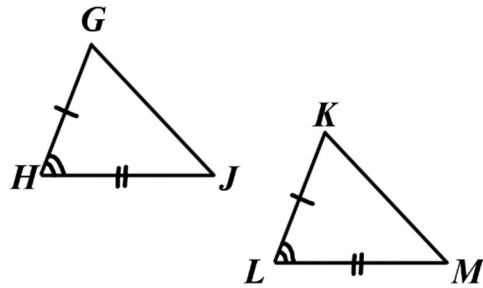
Sides #1:
Sides #2:
Sides #3:



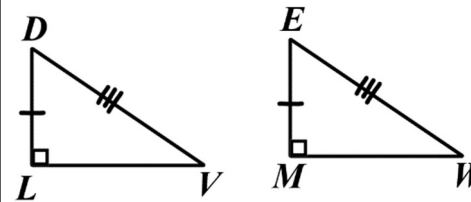
Angles #1:
Angles #2:
Sides (Non-Included):

If _____ angles and the _____ side of one triangle are congruent to _____ angles and the _____ side of another triangle, then the two triangles are _____.

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



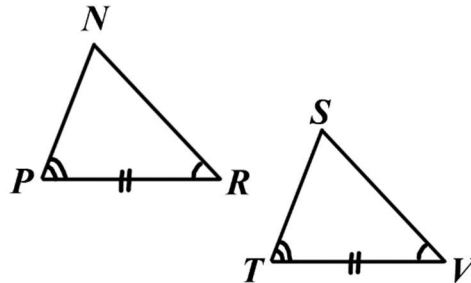
Sides #1:
Angles (Included):
Sides #2:



Right Angles:
Hypotenuses:
Legs:

If the _____ and one _____ of a _____ triangle are congruent to the _____ and one _____ of another _____ triangle, then the two triangles are _____.

If _____ angles and the _____ side of one triangle are congruent to _____ angles and the _____ side of another triangle, then the two triangles are _____.



Angles #1:
Sides (Included):
Angles #2:



Other combination of sides and angles do not work for proving triangle congruency. Two common examples are AAA and SSA.

AAS

SSS

Cut along dotted line

Cut along dotted line

HL

SAS

Fold along this vertical line before cutting.

Fold along this vertical line before cutting.

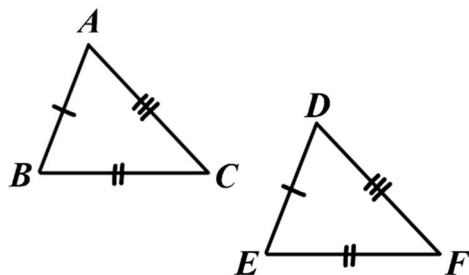
Cut along dotted line

Cut along dotted line

**Not
Possible**

ASA

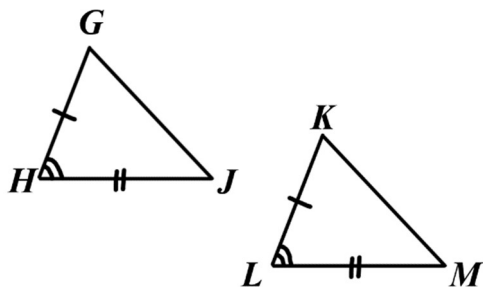
If all three sides of one triangle are congruent to all three sides of another triangle, then the two triangles are congruent.



SSS

$$\begin{aligned} \text{Sides \#1: } & \overline{AB} \cong \overline{DE} \\ \text{Sides \#2: } & \overline{BC} \cong \overline{EF} \\ \text{Sides \#3: } & \overline{AC} \cong \overline{DF} \end{aligned}$$

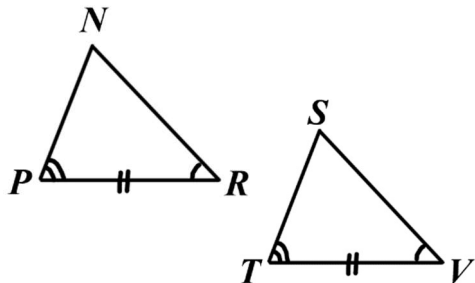
If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the two triangles are congruent.



SAS

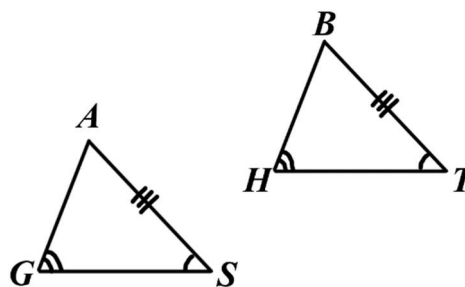
$$\begin{aligned} \text{Sides \#1: } & \overline{GH} \cong \overline{KL} \\ \text{Angles (Included): } & \angle H \cong \angle L \\ \text{Sides \#2: } & \overline{HJ} \cong \overline{LM} \end{aligned}$$

If two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then the two triangles are congruent.



ASA

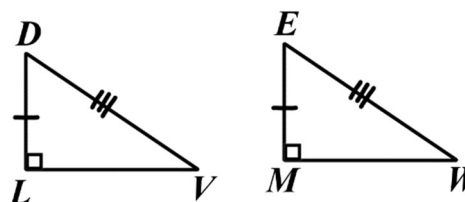
$$\begin{aligned} \text{Angles \#1: } & \angle P \cong \angle T \\ \text{Sides (Included): } & \overline{PR} \cong \overline{TV} \\ \text{Angles \#2: } & \angle R \cong \angle V \end{aligned}$$



If two angles and the non-included side of one triangle are congruent to two angles and the non-included side of another triangle, then the two triangles are congruent.

AAS

$$\begin{aligned} \text{Angles \#1: } & \angle G \cong \angle H \\ \text{Angles \#2: } & \angle S \cong \angle T \\ \text{Sides (Non-Included): } & \overline{AS} \cong \overline{BT} \end{aligned}$$



If the hypotenuse and one leg of a right triangle are congruent to the hypotenuse and one leg of another right triangle, then the two triangles are congruent.

HL

$$\begin{aligned} \text{Right Angles: } & \angle L \cong \angle M \\ \text{Hypotenuses: } & \overline{DV} \cong \overline{EW} \\ \text{Legs: } & \overline{DL} \cong \overline{EM} \end{aligned}$$



Other combination of sides and angles do not work for proving triangle congruency. Two common examples are AAA and SSA.

AAS

SSS

Cut along dotted line

Cut along dotted line

HL

SAS

Fold along this vertical line before cutting.

Fold along this vertical line before cutting.

Cut along dotted line

Cut along dotted line

**Not
Possible**

ASA