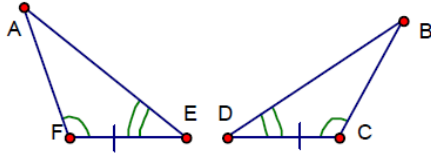


## Geometry 5.7 Notes: Using Congruent Triangles

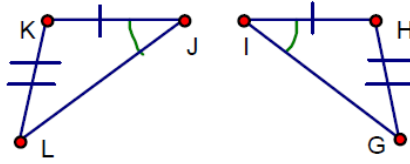
Warm-up:



1.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

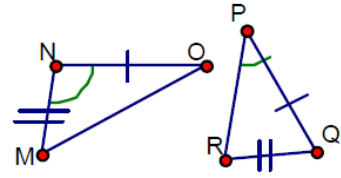
SAS    ASA    SSS  
AAS    NOT CONGRUENT



2.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

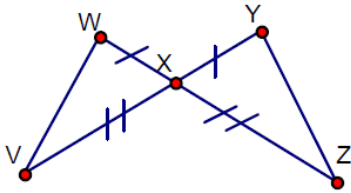
SAS    ASA    SSS  
AAS    NOT CONGRUENT



3.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

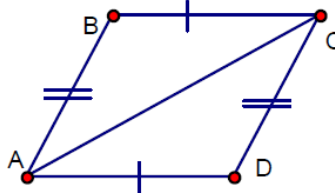
SAS    ASA    SSS  
AAS    NOT CONGRUENT



4.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

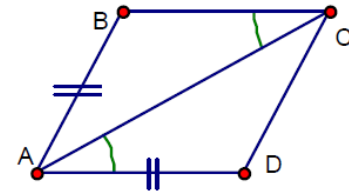
SAS    ASA    SSS  
AAS    NOT CONGRUENT



5.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

SAS    ASA    SSS  
AAS    NOT CONGRUENT



6.  $\triangle \text{---} \cong \triangle \text{---}$

Circle:

SAS    ASA    SSS  
AAS    NOT CONGRUENT

**CPCTC: Corresponding Parts of Congruent Triangles are Congruent**

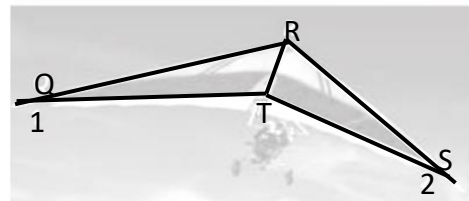
**Ok.... But what does that mean??**

If two triangles are known to be congruent, then all corresponding angles/sides are also congruent. For example, if 2 triangles are congruent by SSS, then the angles of the 2 triangles are congruent.

1. Explain how you can use the given information to prove that the hang glider parts are congruent.

**Given:**  $\angle 1 \cong \angle 2$ ,  $\angle RTQ \cong \angle RTS$

**Prove:**  $\overline{QT} \cong \overline{ST}$



**\*\*HINT:** If you can show that  $\triangle QRT \cong \triangle SRT$ , then you know that  $\overline{QT} \cong \overline{ST}$  since these sides are corresponding!

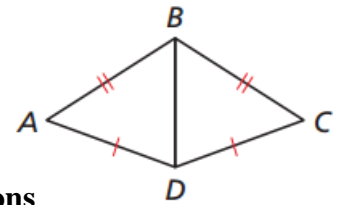
Statements

Reasons

Statements	Reasons

2. Write a two-column proof.

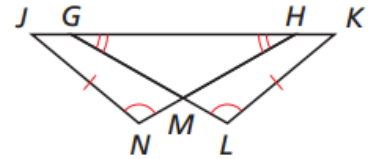
**Given:** the diagram  
**Prove:**  $\angle A \cong \angle C$



Statements	Reasons

3. Write a two-column proof.

**Given:** the diagram  
**Prove:**  $\overline{GK} \cong \overline{HJ}$

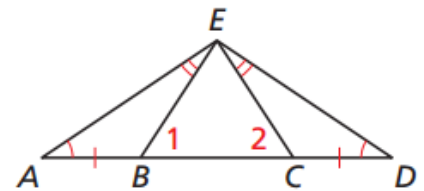


Statements	Reasons

**Period 6 ONLY:**

\*\*There are at least TWO different ways to write this proof: one with  $\cong$   $\Delta$ s and CPCTC, one without. Challenge yourself! Try to write both proofs 😊

**Given:** the diagram  
**Prove:**  $\angle 1 \cong \angle 2$



Statements	Reasons

Statements	Reasons