



- I can identify and name congruent figures

Two geometric figures are _____ if they have exactly the same **size** and **shape**.

In two congruent figures, **all parts** of one figure are congruent to corresponding parts of the other figure.

So when you write a congruence statement, always list the corresponding vertices _____.

Example #1

Since corresponding parts across corresponding figures are congruent, complete the following congruence statements for $\triangle ABC$ and $\triangle DEF$ below.

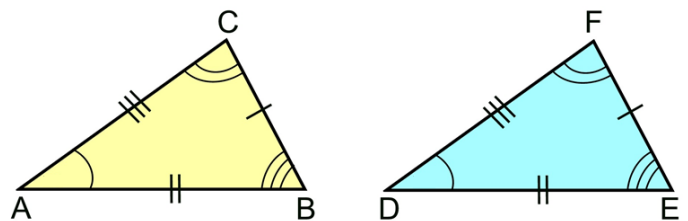
We can look at the markings on angles and the sides to determine that:

Congruent angles:

_____ \cong _____
 _____ \cong _____
 _____ \cong _____

Congruent sides:

_____ \cong _____
 _____ \cong _____
 _____ \cong _____



Since we know corresponding parts of congruent triangles are congruent : \triangle _____ \cong \triangle _____

Example #2 Try On Your Own!

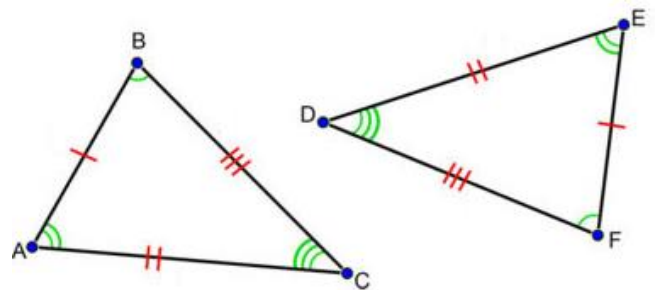
State the corresponding parts of the triangles below, then write a congruence statement.

Congruent angles:

_____ \cong _____
 _____ \cong _____
 _____ \cong _____

Congruent sides:

_____ \cong _____
 _____ \cong _____
 _____ \cong _____



So since we know corresponding parts of congruent triangles are congruent : \triangle _____ \cong \triangle _____

Key Concept	
Reflexive Property	Examples:

In triangle congruence, the reflexive property is used when two triangles _____.

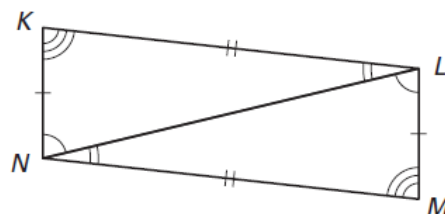
Example #3

Congruent angles:

____ \cong ____
 ____ \cong ____
 ____ \cong ____

Congruent sides:

____ \cong ____
 ____ \cong ____
 ____ \cong ____



So since we know corresponding parts of congruent triangles are congruent : Δ _____ \cong Δ _____

Theorem 4.3	
<p>Third Angles Theorem:</p> <p>If two angles of one triangle are congruent to two angles of another triangle, then the third angles are also _____.</p>	<p>If $\angle B \cong \angle E$ and $\angle A \cong \angle D$ then _____.</p>

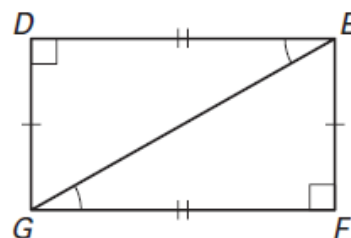
Example #4

Congruent angles:

____ \cong ____
 ____ \cong ____
 ____ \cong ____

Congruent sides:

____ \cong ____
 ____ \cong ____
 ____ \cong ____



So since we know corresponding parts of congruent triangles are congruent : Δ _____ \cong Δ _____

Example #5

Given $\triangle ABC \cong \triangle DEF$, find the values of x and y .

