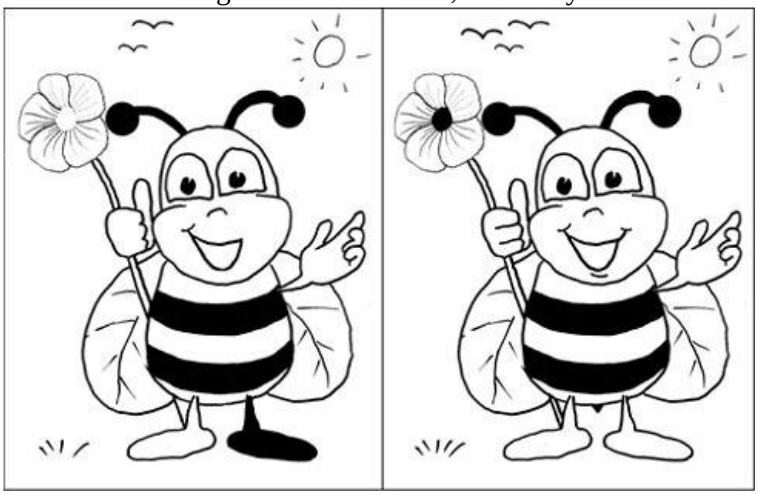
Are these two images the same? If not, circle any differences that you see.

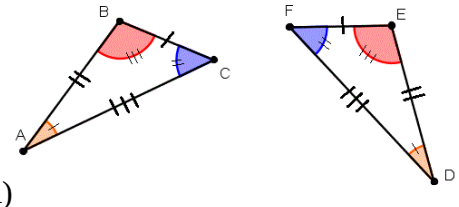


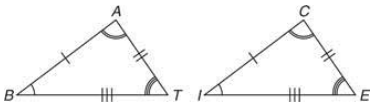
Based on your findings, would these two pictures be considered "congruent"? _____

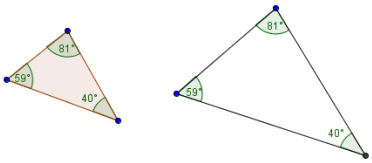
What makes two images or shapes congruent? _____

Recall that in order for two shapes to be congruent, they have to have the same _____ and the same _____; in other words, both the _____ and the _____ have to have the same measure.

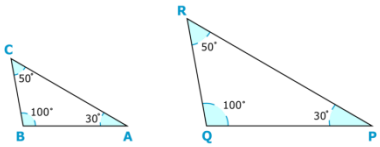
Example 1: Are the following pairs of triangles congruent?

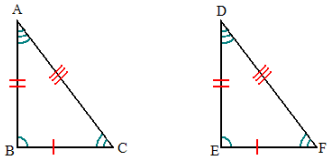
A) 

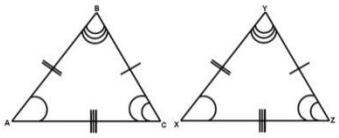
B) 

C) 

Practice 1: Are the following pairs of triangles congruent?

A) 

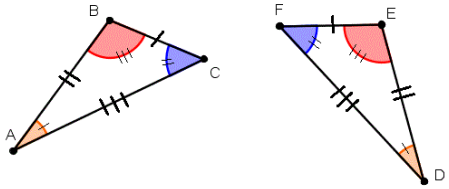
B) 

C) 

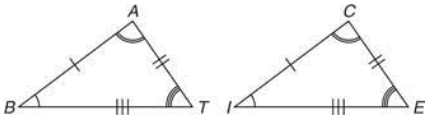
Congruence notation

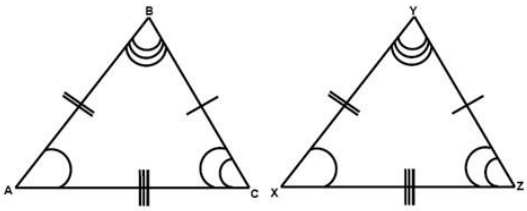
Whenever we write that two shapes are congruent, we must line up the congruent _____ in the names (i.e., the angle represented by the first letter in the first shape is congruent to the angle represented by the first letter in the second shape; the second one matches with the second one; and the third one matches with the third one). You can write the angles in any order, but you have to follow the same order on the second one (e.g., smallest to largest, smallest numbers of arcs to largest, etc.).

Example 2: Write the congruence statement of the two triangles below, and then indicate which angles are congruent to which angles.



Practice 2: Write the congruence statement of the two triangles below, and then indicate which angles are congruent to which angles.

A) 

B) 

Likewise, each side represented by each two-letter combination formed with the name on the left, matches the two sides represented by the two-letter combinations formed with the name on the right following the same order (i.e., the first and the second letter form congruent sides; the second and the third letter; and the first and the third letter).

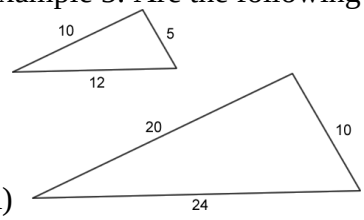
Example 3: Δ YOU ≅ ΔCAN, indicate which sides are congruent to which.

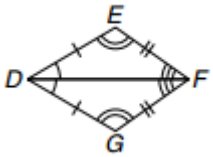
Example 4: Write the three pairs of congruent sides of each pair of congruent triangles given.

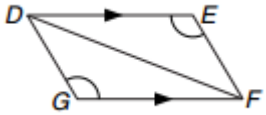
A) Δ HEY ≅ ΔMAN B) Δ CAT ≅ ΔDOG C) Δ HEN ≅ ΔFLY

Sometimes, you will not be given all the measurements of sides or angles, but you will have enough information to figure out whether the triangles are congruent or not.

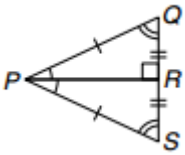
Example 5: Are the following pairs of triangles congruent or not? State the reason(s).

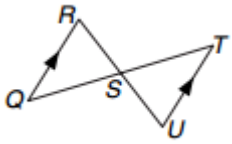
A) 

B) 

C) DG=EF 

Practice 5: Are the following pairs of triangles congruent or not? State the reason(s).

A) 

B) S is the midpoint 

C)