

Lesson Summary

- Two triangles and their respective parts can be compared once a correspondence has been assigned to the two triangles. Once a correspondence is selected, corresponding sides and corresponding angles can also be determined.
- Double arrows notate corresponding vertices. Triangle correspondences can also be notated with double arrows.
- Triangles are identical if there is a correspondence so that corresponding sides and angles are equal.
- An equal number of tick marks on two different sides indicates the sides are equal in measurement. An equal number of arcs on two different angles indicates the angles are equal in measurement.

Problem Set

Given the following triangle correspondences, use double arrows to show the correspondence between vertices, angles, and sides.

1.

Triangle Correspondence	$\triangle ABC \leftrightarrow \triangle RTS$
Correspondence of Vertices	
Correspondence of Angles	
Correspondence of Sides	

2.

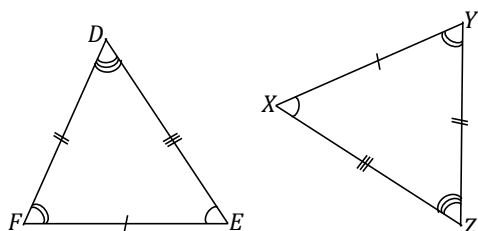
Triangle Correspondence	$\triangle ABC \leftrightarrow \triangle FGE$
Correspondence of Vertices	
Correspondence of Angles	
Correspondence of Sides	

3.

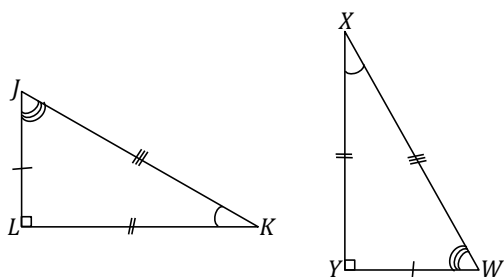
Triangle Correspondence	$\triangle QRP \leftrightarrow \triangle WYX$
Correspondence of Vertices	
Correspondence of Angles	
Correspondence of Sides	

Name the angle pairs and side pairs to find a triangle correspondence that matches sides of equal length and angles of equal measurement.

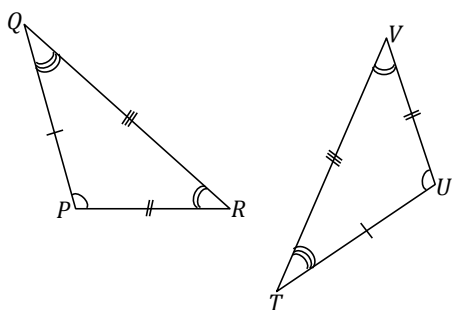
4.



5.

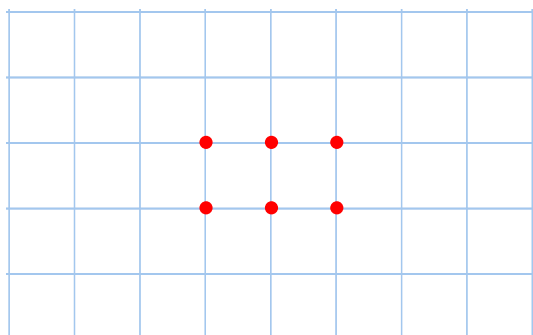


6.



7. Consider the following points in the coordinate plane.

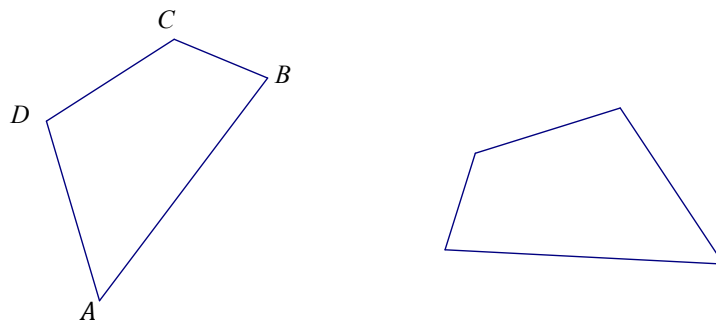
a. How many different (non-identical) triangles can be drawn using any three of these six points as vertices?



b. How can we be sure that there are no more possible triangles?

8. Quadrilateral $ABCD$ is identical with quadrilateral $WXYZ$ with a correspondence $A \leftrightarrow W$, $B \leftrightarrow X$, $C \leftrightarrow Y$, and $D \leftrightarrow Z$.

a. In the figure below, label points W , X , Y , and Z on the second quadrilateral.



b. Set up a correspondence between the side lengths of the two quadrilaterals that matches sides of equal length.

c. Set up a correspondence between the angles of the two quadrilaterals that matches angles of equal measure.