

Shapes on the Geoboard

Objectives

- Focus on properties of shapes
- Compare shapes to determine congruence
 - Same size, same shape
 - Different size, same shape
 - Recognize congruence in figures with different orientations (proximity, position, directions and turns)

Materials

geoboard for each student
2 geobands for each student
geodot paper
scissors
rulers

Directions

1. Make two congruent triangles, each on a separate geoboard but in different positions and with one triangle flipped.



2. Have the students explain why the two triangles are the same. Demonstrate how to draw the triangles on dot paper, cut them out, and compare them. When two shapes are same size and shape they are congruent.

Shapes on the Geoboard

3. Change the triangles on the geoboards.
Have the students explain why they are different (same shape, different size).



4. Have the students to make triangles on their geoboards and draw them on dot paper. They should make at least eight different triangles. They can use a ruler to connect the dots to make the lines straighter.
5. Have students determine if the triangles are congruent. As the teacher walks around have students look at different orientations.

Class Discussion

1. Have groups that worked together choose two triangles from their eight.
2. Put all these triangles together as a class set.
3. Ask the class if they see some triangles that share some characteristic. For example, "These belong together because they have one short side." Arrange the triangles into two sets, those that have one short side and those that do not.
4. Rearrange the class set of triangles. Ask for a new way to sort them.

This activity can be done with any other polygon: rectangles, pentagons, quadrilaterals, pentagons, hexagons, etc.

Geoboard Template

