

Hands-On Geometry

The activities described here are creative, informal, intuitive geometry activities to stress higher-order thinking. With these activities children develop spatial concepts such as conservation of area—if we cut a figure into two parts and rearrange the pieces we will obtain another figure that has the same area, even though it may look bigger. Children in kindergarten can do the first five activities in a session of 20-30 minutes. Informal language such as “the small triangle” can be used and accepted at this level. The number of activities can be increased for higher grades. Activities are also adjusted for each grade with more vocabulary added, and a more precise description of the figures. For the activities, right isosceles triangles of two sizes, and a square cut out from cardboard as shown are used.

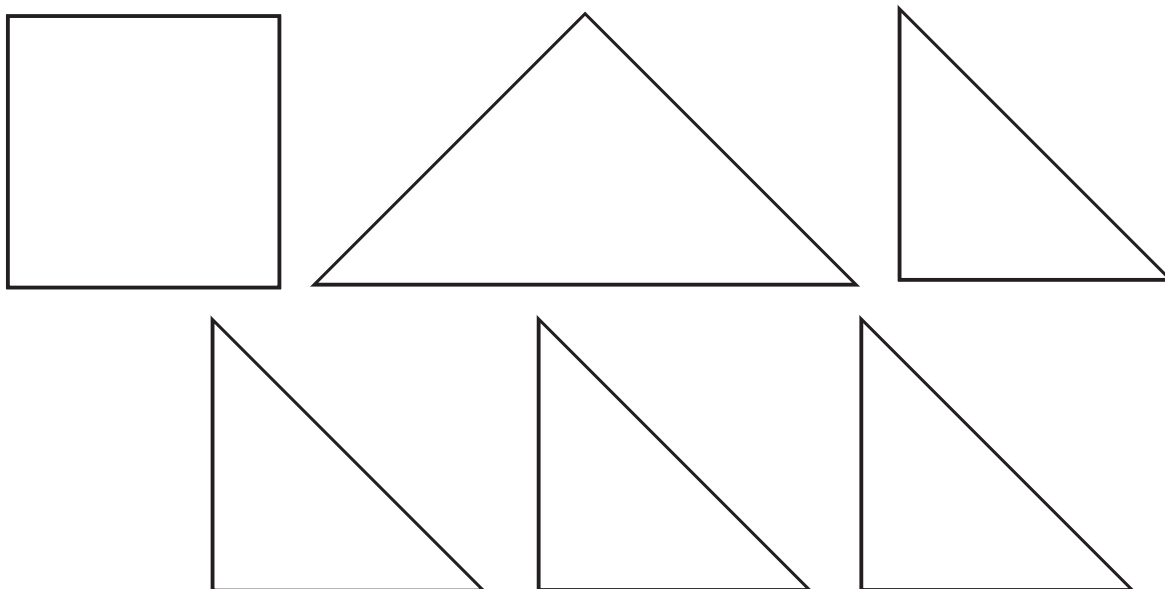


Figure 1. The set of cardboard figures used in these activities.

Activity 1

- 1) Take the cardboard square and cover the square in Figure 2.
 - *What can you say about the shape and size of the two shapes?*
 - *What can you say about their areas?*

- 2) Use the cardboard square and cover the shape Figure 3.
 - *What can you say about the two shapes?*
 - *What kind of shape is Figure 3?*

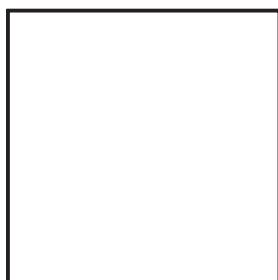


Figure 2

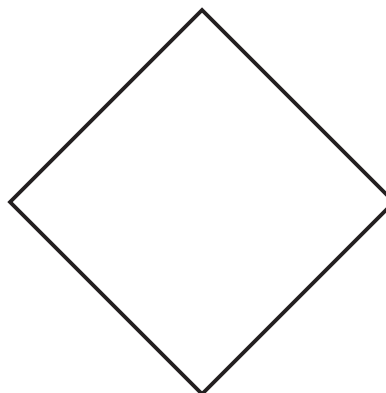


Figure 3