

Congruence and Similarity

Dear Family,

Your child is studying transformations of figures, including translations, reflections, rotations, and dilations. He or she will apply transformations to determine whether figures are congruent or similar. Your child is also learning about angle relationships, such as the relationships among angles in a triangle and among angles created by different types of lines.

Here is an activity you can do with your child to help him or her practice transformations.

Transforming Shapes

Materials: Two identical shapes cut from paper, about 12 inches of string, coin or other small object

Step 1 Stack the paper shapes one on top of the other so that they align exactly.

Step 2 Choose a transformation: translation, reflection, or rotation. If you chose reflection, stretch the string in a straight line a few inches from the shapes. If you chose rotation, place the coin a few inches from the shapes and specify an angle of rotation, such as 90° or 180° .

Step 3 Have your child perform the selected transformation by picking up the top shape from the stack and translating, reflecting across the string, or rotating around the coin.

Step 4 Choose a different transformation and repeat.

Observe Your Child

Focus on Mathematical Practices

Attend to precision.

Help your child become proficient with this Mathematical Practice. Ask him or her to describe each transformation using the terms *preimage*, *image*, and *orientation*.