

# Transformations

Directions: Graph each pre-image and its image under the given transformation. Match the answers between Column 1 and Column 2, then color.

Column 1

Triangle ABC with A(3, -1), B(1, -5), and C(1, -1) reflected across the y-axis. What are the coordinates of the image?

Quadrilateral JKLM with J(1, 4), K(4, 4), L(4, -1), and M(2, -1) translated 3 units down. What are the coordinates of M?

Parallelogram EFGH with E(2, 3), F(5, 3), G(2, 3), and H(-5, 2) rotated 90 degrees clockwise about the origin. What are the coordinates of F?

Rhombus RSTU with R(-1, 6), S(1, 6), T(1, 3), and U(-2, 2) dilated by a scale factor of 2 with the origin as the center of dilation. What are the coordinates of T?

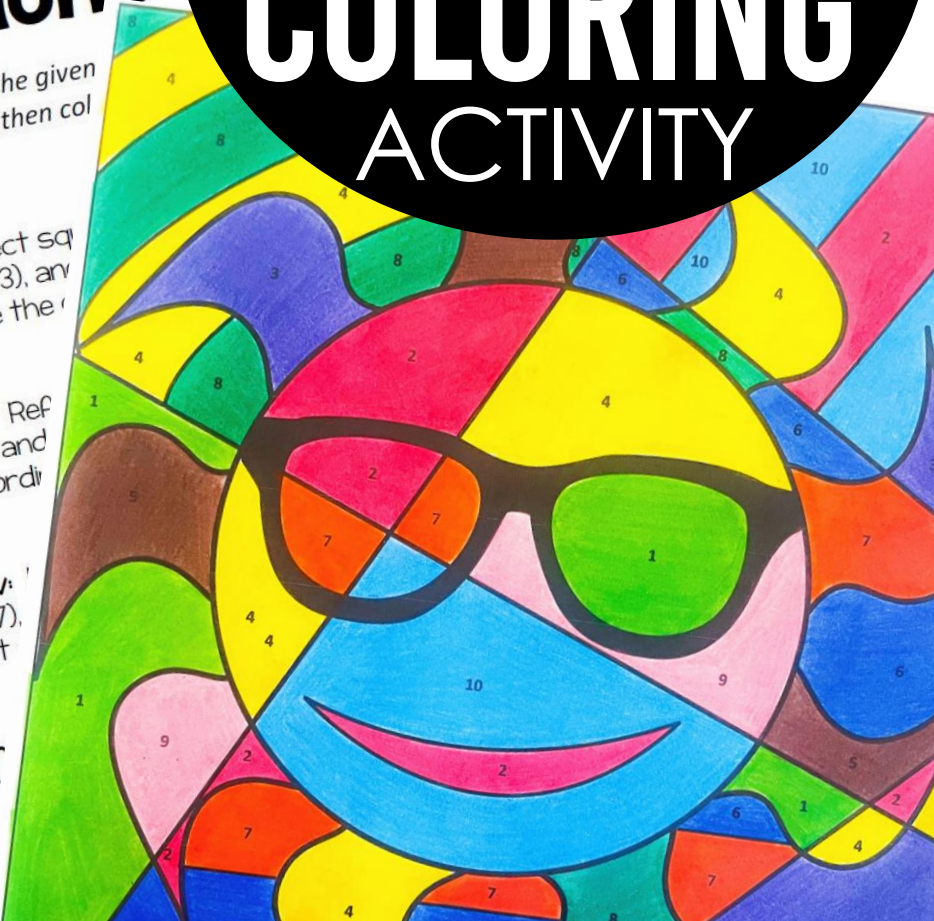
Red: Reflect square ABCD with A(-4, 6), B(4, 6), C(4, 3), and D(-4, 3) across the y-axis. What are the coordinates of C?

Orange: Reflect square ABCD with A(8, 5), B(8, 1), C(2, 1), and D(2, 5) across the y-axis. What are the coordinates of C?

Yellow: Translate square ABCD with A(-6, 7), B(6, 7), C(6, 3), and D(-6, 3) 3 units down. What are the coordinates of C?

Light Blue: Translate square ABCD with A(-1, 6), B(1, 6), C(1, 3), and D(-1, 3) 3 units down. What are the coordinates of C?

# COLORING ACTIVITY



# TRANSFORMATIONS

*Reflections, Translations,  
Rotations, & Dilations*

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# TRANSFORMATIONS

## Coloring Activity!

**Objective:** To practice graphing transformations including reflections, translations, rotations, and dilations. Reflections include the x-axis and y-axis. Rotations include  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$  about the origin. For all dilation problems, the origin is the center of dilation.

**Directions:**

- 1) Pair students together. Assign one partner Column 1 and the other partner Column 2. Each student needs a copy of the problems, the graphs and the sun.
- 2) Students work on their own side, graphing each pre-image and its image under the given transformation. They will be asked to identify a certain point after the transformation. After they have completed all 10 problems, they compare answers. They will have matching answers that will indicate how to color the sun. For example, if #1 is (1, 5) and light green is (1, 5), then all 1's are light green on the sun.

