Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sect \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8th Grade: Rigid Motions

In class we’ve learned about the three rigid motions – translations, reflections, and rotations. Let’s see how much you truly understand these transformations. This project will demonstrate just how these transformations affect a shape, and how much you understand about each of these movements.

Follow the steps below and be sure to include all of the requested information.

1. On a separate sheet of graph paper write your first name anywhere on the coordinate plane. Be sure to leave enough space to write your name clearly. You may either print or use cursive, or be artistic and use block letters. In any case, **each letter should be at least 3 squares tall.** If your name is too long, you may shorten it or use a nickname, but all names should be **at least 5 letters long**.
2. Your original name should **span at least two quadrants**!
3. Identify and list at least 12 points that appear anywhere on the letters of your name. Be sure to list the ordered pairs on the attached sheet.
4. Choose one of the 3 rigid motions (translation, reflection, or rotation) to perform on your name. Specify what transformation you are applying.
5. Be sure to identify the rule to apply in conjunction with the transformation. (how many units in what direction for a translation, across the x or y axis for reflection, or how many degrees for a rotation)
6. Using the rules we’ve learned in class, take each of your 12 identified points, and apply the proper rules to identify the new coordinates.
7. Once you’ve identified the new coordinates, plot them on the coordinate plane. Connect the dots to draw the new image. Be sure to be careful – your name may not appear backwards, upside down, sideways, etc. Use a color pencil to differentiate the new image from the original name.

What transformation are you applying? Specify either how many units in what direction for a translation, across the x or y axis for a reflection, or by how many degrees for a rotation.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Original Point: Transformation Rules: New point for image:

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |