Transformation Graphing Project

You are going to create a design or drawing that will be translated, reflected, and rotated around the coordinate plane.

**Step 1: Create your drawing template**
The following rules apply when creating your drawing:

- It must fit within 1 quadrant of your graph
- It must NOT be symmetrical
- It must have sufficient detail. If you aren’t sure ASK.
- The drawing must have corners at the points on the coordinate plane. Diagonals are allowed, there just must be some things that you will be able to use to do your transformations. (I WILL SHOW YOU EXAMPLES!!!)
- The drawing must be neat and use straight lines when necessary (curved lines are appropriate in certain situations when your design needs them)
- KEEP IT SIMPLE!!! If you make your drawing too detailed, you will have trouble making transformations.
- When you are finished, cut your template out to do your transformations.
Step 2: Translations

- Place your template somewhere in the second quadrant and neatly trace around it.
- Outline your drawing. The outline of your original should be darker than the transformations.
- If your drawing has a specific up and down, it should start off facing up.
- Translate your original 3 times. Your translations should take you to the first, third, and fourth quadrants, but they do not need to go in order. You are welcome to do multi step translations if you want. Make sure you record what translations you used below and attach it to your final project.

When the original translations are done, each translation and the original should be colored the same.

Translation #1:__________________________________________________________

Translation #2:__________________________________________________________

Translation #3:__________________________________________________________
Step 3: Reflections

- Place your template somewhere in the second quadrant and neatly trace around it. **It must begin in the same spot as your translation!
- Outline your drawing. The outline of your original should be darker than the transformations.
- If your drawing has a specific up and down, it should start off facing up.
- Reflect your drawing over the y axis, then the x axis, then the y axis again.

When the original reflections are done, each reflection and the original should be colored the same (and the same as the other transformations)

Step 4: Rotations

- Place your template somewhere in the second quadrant and neatly trace around it. **It must begin in the same spot as your translation and reflection!
- Outline your drawing. The outline of your original should be darker than the transformations.
- If your drawing has a specific up and down, it should start off facing up.
- Rotate your drawing 90° clockwise, 180°, and 90° counterclockwise.

When the rotations are done, each rotation and the original should be colored the same (and the same as the other transformations)
Grading Rubric

Name ____________________________________________

_____ NOT symmetrical (5 points)
_____ Sufficient detail. (2 points)
_____ Corners at the points on the coordinate plane. (5 points)
_____ Neat and straight lines used when necessary (3 points)
_____ Neatly traced and begins in the second quadrant (5 points)
_____ Outlined darker than the transformations (2 points)
_____ Translations correct (10 points)
_____ Translations recorded (15 points <5 points each>)
_____ Translations into all 3 other quadrants (3 points)
_____ Reflections correct (15 points)
_____ Rotations correct (15 points)
_____ Colored the same (5 points)
Overall project score: ____________ (85 points possible)

Grading Rubric

Name ____________________________________________

_____ NOT symmetrical (5 points)
_____ Sufficient detail. (2 points)
_____ Corners at the points on the coordinate plane. (5 points)
_____ Neat and straight lines used when necessary (3 points)
_____ Neatly traced and begins in the second quadrant (5 points)
_____ Outlined darker than the transformations (2 points)
_____ Translations correct (10 points)
_____ Translations recorded (15 points <5 points each>)
_____ Translations into all 3 other quadrants (3 points)
_____ Reflections correct (15 points <5 points each>)
_____ Rotations correct (15 points <5 points each>)
_____ Colored the same (5 points)
Overall project score: ____________ (85 points possible)
EXAMPLES!!