

Name \_\_\_\_\_ Date \_\_\_\_\_ Hr \_\_\_\_\_

### Chapter 4 Transformations Project

*The goal of this project is to help you understand transformations on a coordinate grid. You may ask for my approval before moving onto the next section if you want it checked. It will be graded at that time for that part, but then you may move forward using accurate information. Each part of the project should have its own slide(s) in your submitted presentation on Google Slides.*

*Every slide will have: one graph with original picture and points, the new points, and a table(s) with original coordinates and new coordinates properly named. There are five videos on google classroom that explain the parts of the project and notes with formulas posted to the website. You also have your book as a resource for transformations. All points should be labeled properly based on images and preimages.*

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**Part 1:** (14 points) Introduction:

In this part, you need to select an image and upload it to Desmos.com. Once you have it uploaded behind a graph on Desmos, you should create **at least** 10 points. Keep in mind your graph may require more points to make your image more obvious as to what it is after you perform transformations. I am happy to approve your image if you want me to, just ask me. Your first slide of your presentation should be a screenshot of your Desmos graph with your image and your 10+ points named appropriately.

Grade \_\_\_\_\_

Comments:

**Part 2:** (15 points) 4.1 Translations:

During part two, you will translate your original image from part 1. You get to choose how you would like to translate it, but you will complete three different translations. This part will require three different slides in your final presentation. Provide a slide for each translation that explains how many units in which direction and has a table with the original coordinates and your new coordinates. Be sure to label each point correctly. Each slide should also have one graph with the original image and your new points labeled.

- Slide 1: Choose a number and translate your image to the right or left that many units.
- Slide 2: Choose a number and translate your image up or down that many units.
- Slide 3: Combine both translations from the previous slides and create a new image.

Grade \_\_\_\_\_

Comments:

**Part 3:** (15 points) 4.2 Reflections:

This section has three parts to it. You will be reflecting your original image over both axes and then the line  $y = x$ . Three different slides are required; each should include a graph with the original graph and the new coordinates labeled correctly, and a table that includes labeled coordinates from both the preimage and the image.

- Slide 1: Reflect your original image across the x-axis.
- Slide 2: Reflect your original image across the y-axis.
- Slide 3: Reflect your original image over the line  $y = x$ .

Grade \_\_\_\_\_

Comments:

**Part 4:** (15 points) 4.3 Rotations:

In part four, you will be rotating your original image counter-clockwise (CCW) and clockwise (CW). Just like the two previous parts, you should include one graph with your picture graphed and your new image coordinates labeled. Each slide will also need to have the labeled table of your original and new coordinates. We will use the origin as our center of rotation for all the rotations below.

- Slide 1: Rotate your original image 90 degrees CCW.
- Slide 2: Rotate your original image 180 degrees CW.
- Slide 3: Rotate your original image 270 degrees CCW.

Grade \_\_\_\_\_

Comments:

**Part 5:** (10 points) 4.5 Dilations:

This part is about enlarging and reducing your original image. The origin will be used as the center of dilation for our enlargements and reductions. Just as before, there will be a slide for each dilation. Each slide will include one graph with the preimage and image, and one table that is labeled and includes both the original and new coordinates.

- Slide 1: Enlarge your image by double.
- Slide 2: Reduce your image by half.

Grade \_\_\_\_\_

Comments:

**Part 6:** (10 points) *Video presentation:*

In this section you will record yourself explaining one of the parts (2 – 5) from the project. Be sure to include the graph and tables in your video. Your voice is required to be on the video, but not your face. The viewer should be able to listen to your explanation while they watch you demonstrate how to apply your chosen transformation. All videos should be accessible on a slide in your presentation so that there is no problem viewing the video through the presentation. If the teacher is not able to access your video during the presentation process points will be deducted. Your options for recording yourself are (but not limited to): WeVideo, Chromebook Recorder, Awesome Screenshot, Screencastify, or using your phone (if you ask permission.)

Grade \_\_\_\_\_

Comments:

**Part 7:** (15 points) *Multiple Choice practice requirement.*

The Quizizz link will be posted to Google Classroom for you to complete and earn a grade on practice multiple choice problems. These problems are to help assess the transformation concepts even though you will not be taking a tangible test for this chapter. Please screenshot your entire screen and upload your screenshot of your final score for this section along with an uploaded picture of your work to earn full credit for this part of the project. The work and screenshot of your score is worth 2 points.

Grade \_\_\_\_\_

Comments:

**Part 8:** (10 points) *Miscellaneous.*

This is where the creativity, effort, and your final product affect your final grade. Is your project neat, clean, organized, typed, colorful, pictures, etc.? Did each slide explain what you did on that slide to your original image? Did you follow the directions for each part of the project?

Grade \_\_\_\_\_

Comments:

$$\text{Total Grade } \frac{\quad}{106} = \quad \%$$