**Quarter #1 Geometry Project**

**(Transformation Investigation)**

You were out on a hot date earlier this evening. Everything was fabulous from the delicious meal to a great conversation to the mutual attraction you sensed. You came home in an extremely good mood. As you took out your keys to unlock the front door, you noticed that your door was already ajar. This was an unwelcome surprise!

You enter your home cautiously keeping an eye out for intruders. After checking all the rooms (and closets) you decide there is no sign of an actual break-in. You figure you must have simply neglected to close the front door properly upon hurrying out for your date.

As you kick your feet up on the couch to watch a little TV, you start to notice that several items around the room seem to have shifted! You start to get an uncomfortable feeling, so you call the police. When a detective arrives at your house you go through each room together. Nothing seems to be stolen. The detective says, “sometimes our minds play tricks on us!” You certainly don’t appreciate his sarcasm & you still suspect foul play. Could the source of your disturbed home be:

1. College kids playing a prank?
2. A ghost haunting you?
3. A jealous ex-boyfriend/girlfriend?
4. Any other of 10,000 possibilities?

You & a friend decide to conduct a more thorough investigation on your own. Over the next week the two of you will need to explore both **rigid & non-rigid** transformations that seem to have taken place in your house. In doing so, you will examine **before** and **after** pictures of various objects (pre-images & images). Also, feel free to use measuring tools (e.g., protractor), math calculations, and formulas to make a solid case before the detective who ridiculed you for having an “overactive imagination”.

**Grading Rubric:**

Team members will receive the same grade based on the criteria below:

1. Photographs of 8 different objects. Must contain descriptions of the original objects & how they changed **- 25% of grade**
2. Math calculations & coordinate Geometry for the following concepts **- 50% of grade:**
* Translation
* Reflection
* Rotation
* Dilation
* Composition
* Rotational Symmetry
* Line of Reflection
* Line of Symmetry
* Function Rules & Noticeable Patterns
1. A typed 350-word summary of your difficulties/successes, pleasures/distastes, & what you learned from the project **- 25% of the grade**

**Helpful Resources:**

1. Mr. Aidi will be available to help you throughout the week. However, students will be expected to work hard in class within their selected teams. Goofing around will result in a major loss of POL points!
2. Rely on your notebook from our Geometry class as much as possible. Believe it or not, you can actually learn by reading!
3. Swap contact information with your partner, as *you may need to get together beyond school hours* to collaborate efforts. Mr. Aidi will not accept excuses of any sort on the day that the project is due (e.g., printer failure issues). Plan ahead & work on this project at home a bit instead of homework. It could turn out to be fun!

The due date for this project packet is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Good Luck!**