

**2017 Summer Break Assignment
for Students Entering
Geometry**

Name: _____

Summer Break Assignment - Geometry

Note to the Student:

In middle school, you worked with a variety of geometric measures, such as: length, area, volume, angle, surface area, and circumference. Rotation, reflection, and translation were treated with an emphasis on geometric intuition. In Grade 8, you learned the Pythagorean Theorem and used it to determine distances in a coordinate system. In high school Geometry, you will apply these component skills in tandem with others in the course of modeling tasks and other applications. Therefore, it is important that you keep practicing your mathematical knowledge over the summer to prepare yourself for Geometry. In this assignment, you will find an activity for the summer break. Once you have completed the activity, have a family member sign your packet. Use a math journal to record and show all your work.

Directions:

Create a personal and fun math journal by stapling several pieces of paper together or use a notebook or binder with paper. Be creative and decorate the cover to show math in your world about how do you what do you think when you playing board and card games. This activity is a good way to reinforce basic computation skills and mathematical reasoning.

- The journal entry should:
 - ❖ Have the problem number.
 - ❖ Have a clear and complete answer that explains your thinking.
 - ❖ Be neat and organized.

Trying to play board and card games at least once a week. Some suggested games to play are: Monopoly, Chess, War, Battleship, Mancala, Dominoes, Phase 10, Yahtzee, 24 Challenge, Sudoku, Connect Four, and Risk.

Don't forget to bring your journal and signed packet to school on the first day of school. Your new teacher will be so proud of your summer math work!

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Geometry - Unit 1 Preview

Standard: G.CO.2 - Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle measures to those that do not (e.g., translation versus horizontal stretch).

Part I

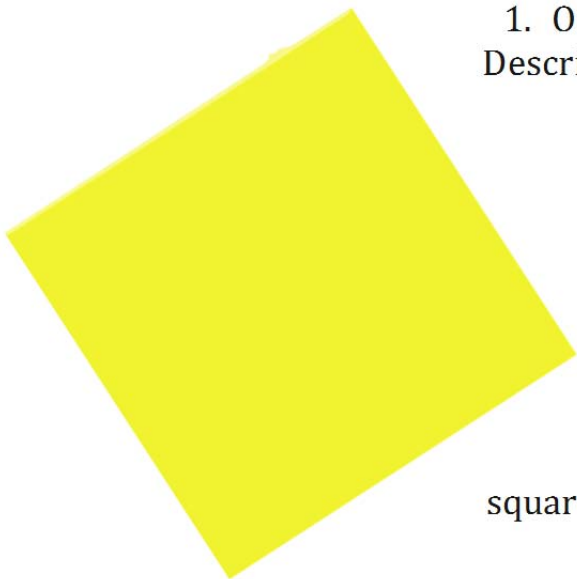
1. On a piece of graph paper, draw and label a square. Describe its original position and size.

2. Rotate it 90° clockwise around any point.

3. Translate it so that it is in the 4th quadrant.

4. Reflect it over a line $y = \text{"a number"}$ so that the square is in the 1st quadrant.

5. Write two different ways that you can get the shape back in its original position.



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Part II

6. On your graph paper, draw and label a triangle. Describe its original position and size.

7. Rotate, translate, and/or reflect the triangle so that the two triangles create a parallelogram. List your steps.

