

TESSELLATION WEBQUEST

TESSELLATION WORKSHEET

NAME _____

This is your chance to decide if you want to design your tessellation by hand or using Geometer's Sketchpad. Your tessellation project must include the following things:

- I. Name your Tessellation as if you were naming a piece of art.**
- II. Use color creatively. (Your color must have a pattern to it.)**
- III. Include a paragraph description of your tessellation explaining the mathematical connections of symmetry and patterns. Explain what type of symmetry your tessellation has and why.**

Creating a tessellation by hand:

1. Using a 3×3 piece of poster board, draw a design along one edge that you will cut out.
2. Decide if you want a tessellation created by rotation or by translation. See p. 669 in book.
 - a. If by rotation, then rotate your cut out around one of its vertices so that it matches up with a side next to it.
 - b. If by transformation, then slide your cut out to the side across from it.
3. Repeat step 2 for another side of your square so that all 4 sides are either cut out or added onto.
4. Trace your design anywhere on your poster paper. Now move or rotate it so that it matches up with one of its own sides and trace it again.
5. Repeat step 4 until the whole poster paper is covered.
6. Color the tessellation creatively.

Creating a Tessellation using Geometer's Sketchpad:

1. Decide if you want to construct your tessellation using translations or rotations.
2. Go to my website: fc.dc-grimes.k12.ia.us/~JPoole and click on "Classes", then "Tessellation Project" under Geometry. Listed there will be a file for Geometer's Sketchpad – Transformation and Geometer's Sketchpad – Rotation. Download whichever file you need.
3. Print off a copy of your tessellation using the color printer (you will need Mrs. Gerzema's approval first).