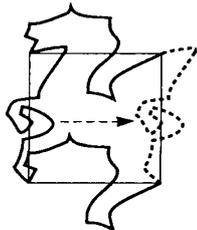


# Geometry Tessellation Project, Jan. 31, 2006

1. Each project must be submitted on two sheets of unlined 8.5" by 11" white paper.
2. The first sheet must contain a drawing of the generating polygon with modifying curves superimposed in their appropriate location. Modifying curves may be transformed by any of these procedures: translation, rotation, reflection, and glide reflection. The resulting shape **must not exceed 3" in diameter in any direction**. Do not show details on this first sheet. At the top right of the first sheet, **print** your name, date, class, and teacher. On the bottom half, include a written description of the procedure used to create the generating region and also procedure used to replicate this region. Use vocabulary learned this year.
3. On the second sheet, show the completed tessellation with interior details added. Make all outlines with black ink, lead pencil, or a computer printer. Use of colored pencil or pencil shading is encouraged.
4. All drawings must be original work, not mere renditions of existing work. Computer-generated entries will be graded according to a different, potentially harsher scale.
5. This project is due **Wednesday, March 8, 2006**. Standard review bonus will be applied as 10% for Tuesday, March 7; 15% Monday March 6, *etc.* Remember the penalty for late work would be: -10% for Thursday, March 9, 2006; -20% on Friday, March 10, 2006, *etc.* Exceptions will be granted only under extenuating circumstances and in consultation with both freshman math teachers.

## Sample Entry



Steve Whitney  
March 10, 2006  
Geometry  
2008/Calkins

We started with a square. The belly cutout translates into a head.  
The rear legs translate from the back.  
The neck become wings. The tail comes from between the forelegs.  
No rotations were used.



6. The following tentative grading schedule may be useful:

Points	Description
15	Generating Polygon Included
10	Full 8.5"x11" done
30	Tessellation Correct
20	Neatness
15±	Originality
10	Written Description
100	Total

## Geometry Origami Project, Jan. 31, 2006

If you choose not to do a tessellation project you may do an origami project instead. As discussed in class, neatness and complexity are important. See links in the Chapter 7 Geometry handout for some help on the web.

The following requirements are preliminary and subject to change. They are only a best guess at this time as we discussed in class.

1. Complexity will primarily be judged based on number of folds. This is not the best indicator, but  $\sum_{i=1}^n F_i \geq 100$  is expected where  $F_i$  is the number of folds in the  $i^{\text{th}}$  origami object and  $n \leq 5$  means there are no more than 5 objects. Also  $F_i \neq F_j$  for  $i \neq j$  is included to disallow identical objects.
2. Neatness matters. Folds should be complete, straight, well creased, sharp, *etc.* The use of origami paper, especially paper with different colors on each side (or possibly patterns), is expected and objects which utilize such multicolors are desired.
3. A sheet of unlined 8.5" by 11" white paper must be included with the headings as specified on the other side. Each origami object must be listed with a paragraph describing its intended shape, approximate number of folds, and where instructions can be found.
4. The due date, bonus structure, and late penalties as listed on the reverse side for the tessellation project shall also apply to the origami project.
5. This is the third year this option has been tried with mixed success.

## Geometry Fractal Project, Jan. 31, 2006

If someone wants to do a project involving Fractals I am open to suggestions. Please consult in February on this issue. The same due date would apply.