

## Six Intersecting Squares

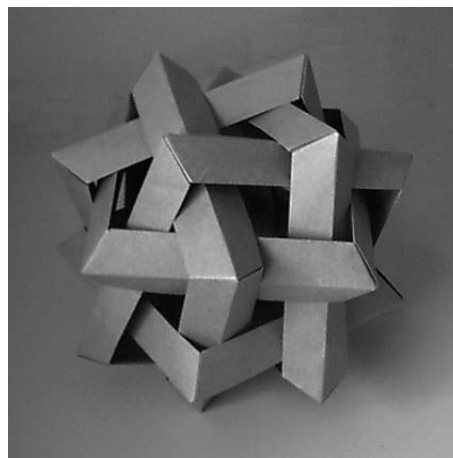
Jorge C. Lucero

Dept. Mathematics, University of Brasilia, Brazil.

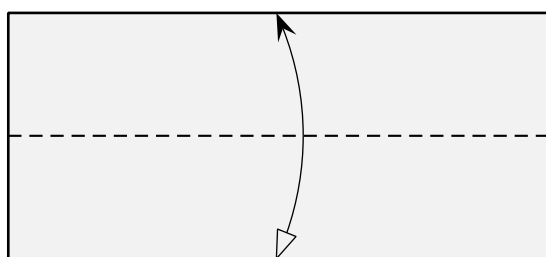
<http://www.mat.unb.br/lucero/orig.html>

E-mail: [lucero@mat.unb.br](mailto:lucero@mat.unb.br)

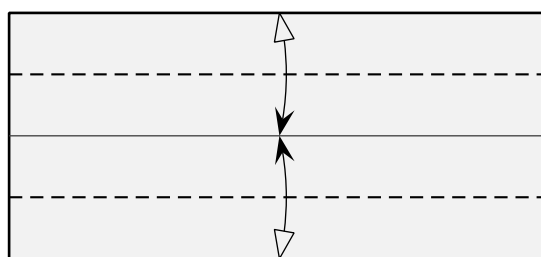
This model is a structure composed of six linked squares. It is one of Dr. Robert J. Lang's polypolyhedra, defined as woven compounds of linked polyhedron skeletons (see <http://www.langorigami.com/science/polypolyhedra/polypolyhedra.php4>). The same structure has already been implemented in a well-known model by Michael J. Naughton, built with tubular frames. The present model represents a different origami solution, using  $120^\circ$  modular units.



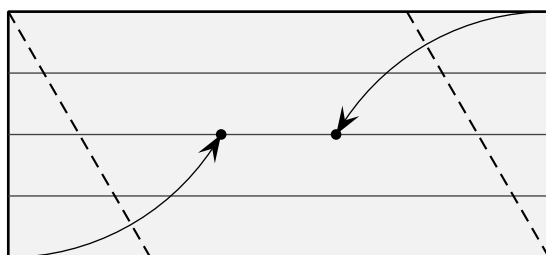
Its construction requires 24 sheets of rectangular paper, with dimensions in the relation 5:11 (or  $1 : 2\frac{1}{5}$ ). In the example shown in the above figure, I used  $10\text{cm} \times 22\text{cm}$  rectangles of wrapping paper. Each unit is folded as follows:



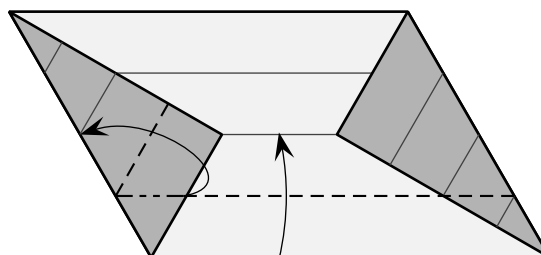
(1) Fold in half and unfold.



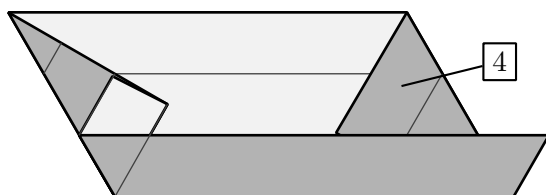
(2) Fold to centerline and unfold.



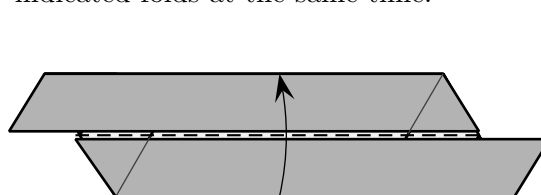
(3) Fold corners to centerline.



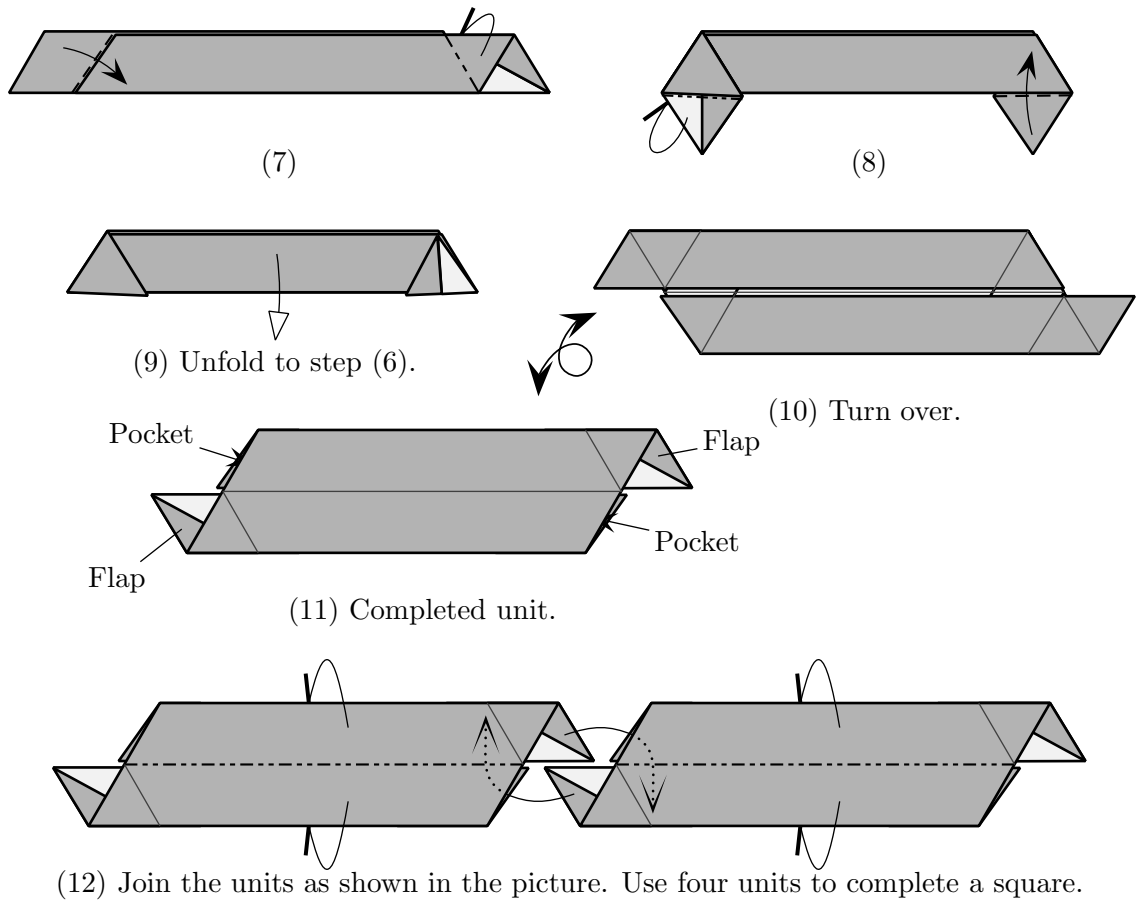
(4) Fold on existing creases. Execute the indicated folds at the same time.



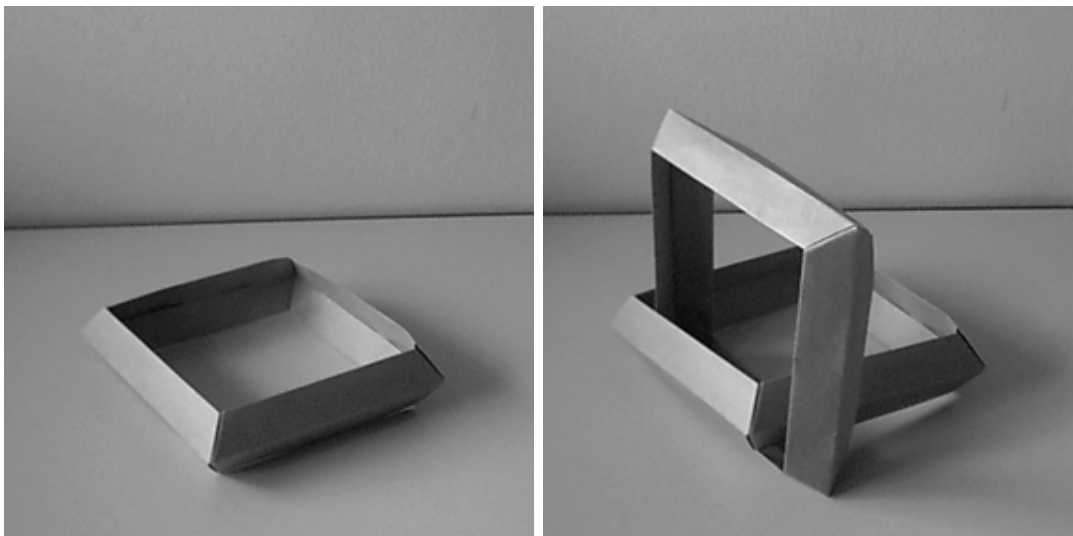
(5) Repeat step (4) on the right side.



(6) Fold in half.

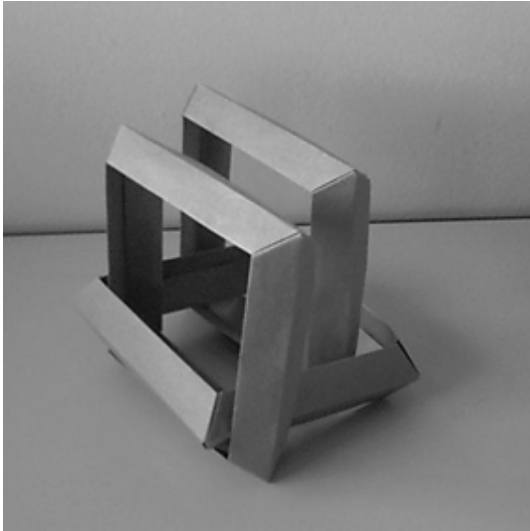


The following sequence of pictures shows the assembly of the squares.

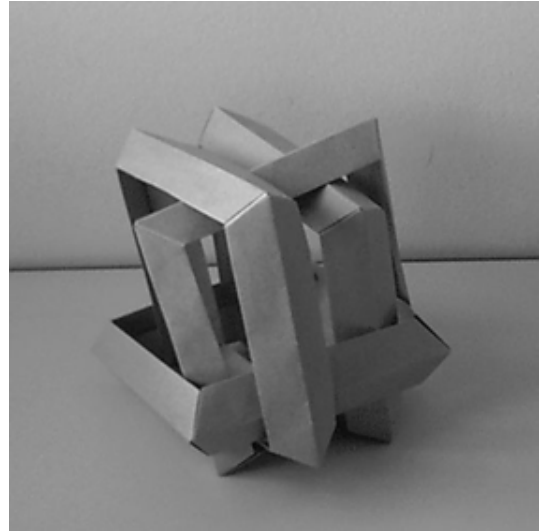


(1)

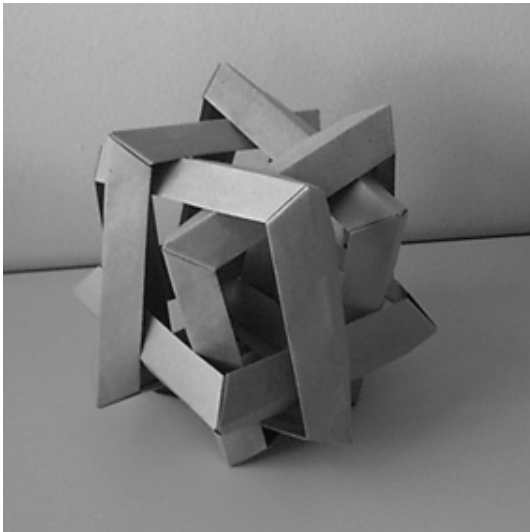
(2)



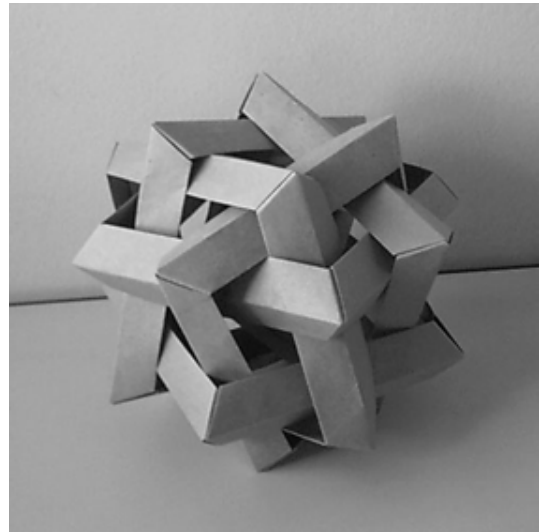
(3)



4)



(5)



(6) Final model.