

# The Basic Abe and Terada Modules

These two very simple modules are both folded from  $1:\sqrt{3}$  or bronze rectangles and can be used to make polyhedra whose faces are equilateral triangles.

As far as I know the basic Terada module was designed by Norishige Terada sometime in the 1980s. The earliest publication of this module I know of was in *Il Libro Del Rompicapo* in Italy in around 1986.

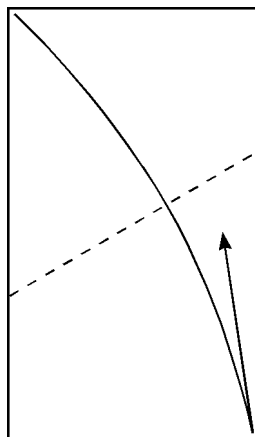
In around 1993 I discovered that it was possible to make a simplified module that could be used to create many of the same forms. When I showed this to Tomoko Fuse she told me it was called the Abe module. I presume that this means it was first designed by Hisashi Abe in Japan, probably also in the 1980s. I have never seen diagrams for the Abe module in print.

A method of creating bronze rectangles from DIN or US letter paper can be found in the Utilities section of this site.

## Folding the Abe module

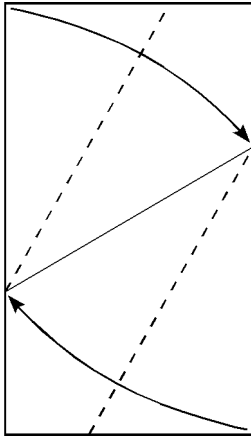
You will need a bronze rectangle. If you are using irogami begin with your paper arranged white side up.

1



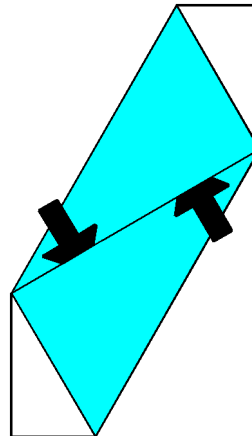
1. Fold in half diagonally, then unfold.

2



2. Fold the upper half of the left edge and the lower part of the right edge onto the crease made in step 1.

3

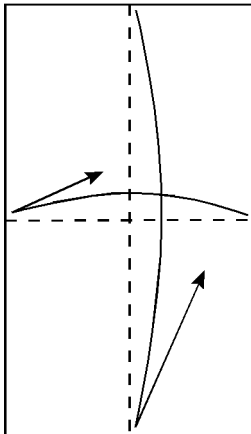


3. The basic Abe module is finished. The module can be configured by the addition of further creases and used to make a large variety of forms whose faces are equilateral triangles.

## Folding the Terada module

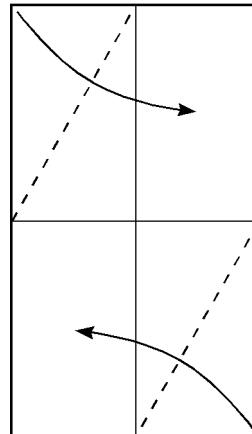
You will need a bronze rectangle. If you are using irogami begin with your paper arranged white side up.

4



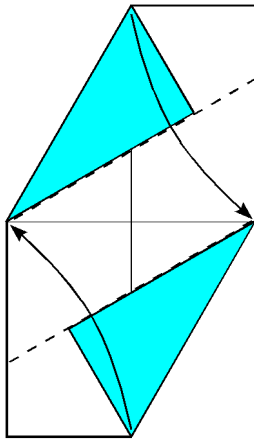
4. Fold in half edge to edge, then unfold, in both directions.

5



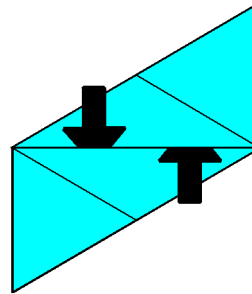
5. The paper is now divided into four quarter size bronze rectangles. Fold the top left and bottom right of these rectangles in half diagonally.

6



6. Fold the sloping upper left and bottom right edges onto the horizontal centre crease.

7



7. The basic Terada module is finished. The module can be configured by the addition of further creases and used to make a large variety of forms whose faces are equilateral triangles.

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