

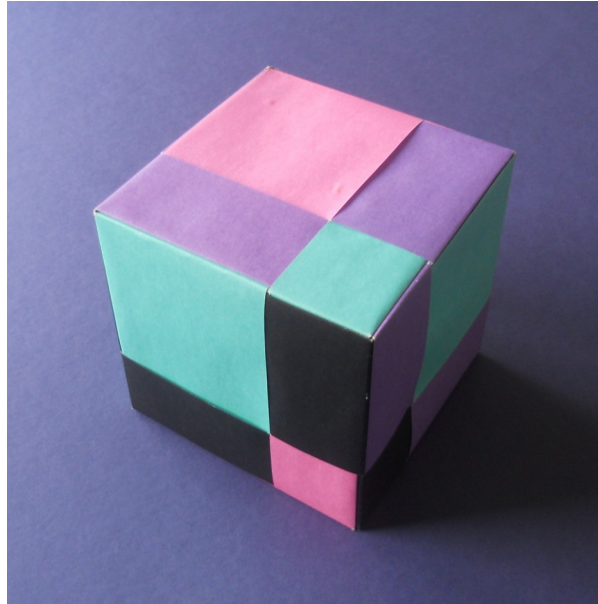
# Designs from Mondrian modules

Designed by David Mitchell

Mondrian modules are Sonobe type parallelogram modules folded in an asymmetric manner. I discovered that this was possible in 1995.

Mondrian modules will make cubes, hexahedra, 12-point stubby stars and, probably, although I have not yet experimented with this, cube combination forms as well.

However, because of their asymmetry, they will not make many of the other forms that can be made with standard Sonobe modules.



The Mondrian Cube

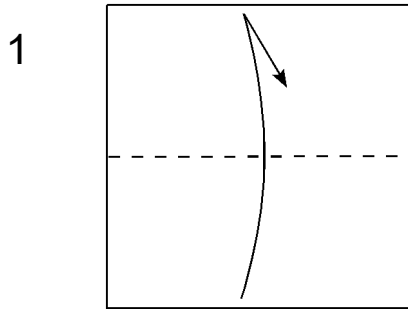
The instructions show you how to make a 12-part Mondrian Cube folded from either modules divided widthwise into a third / two thirds or a quarter / three quarters divisions. This does not, of course, exhaust the possibilities. You will find it a simple matter to reconfigure the modules to allow you to make the other possible forms.

I originally made this cube in four colours ( see picture above ) but, as Leyla Torres has pointed out, the design also works well if you use the palette of five colours, blue, red, yellow, black and white, that Piet Mondrian is famous for using in his paintings. I have included assembly diagrams for one arrangement of each of these colourings. Many others are possible.

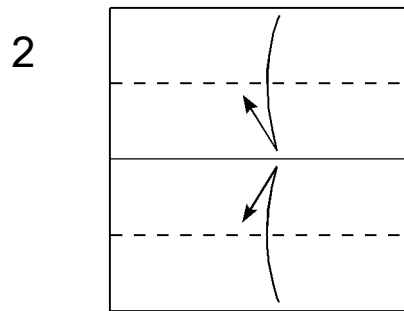
Although the corners of the Mondrian module are turned inside out to create pockets these pockets are not used in the assembly process. However, creating them contributes to the clean finish of the design.

## Folding the basic third / two thirds Mondrian module

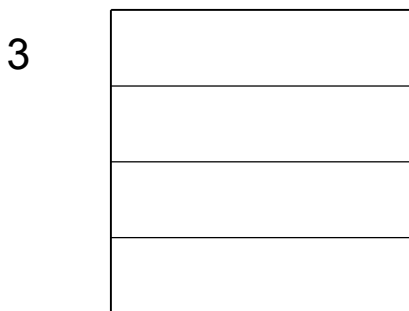
Mondrian modules are folded from squares. In order to achieve the third / two thirds division you will need an extra square of the same size to use as a template. You can use any kind of paper. If you are using irogami begin with your paper arranged white side up.



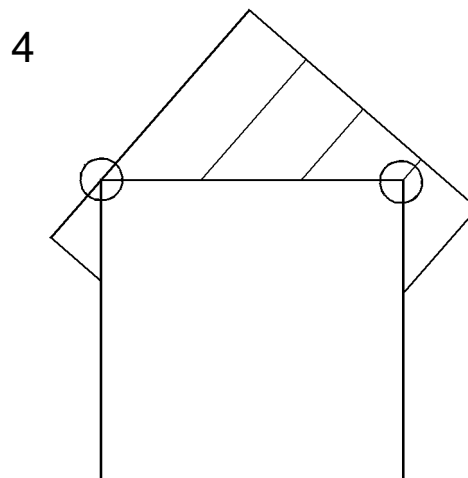
1. Fold the template in half upwards, crease, then unfold.



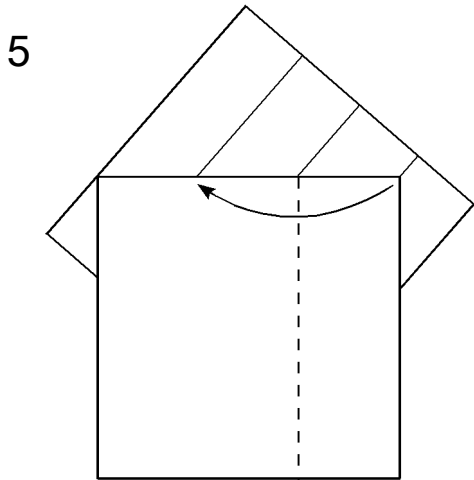
2. Fold both the top and bottom edges to the middle, crease, then unfold.



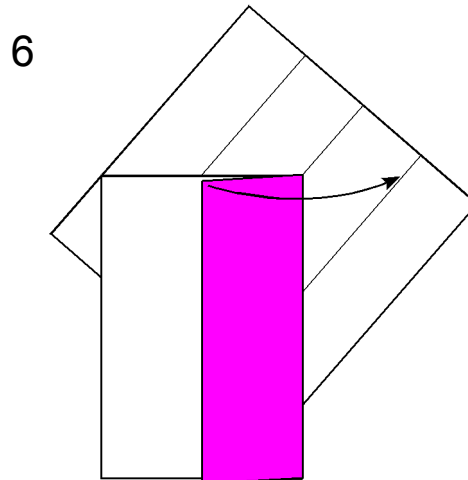
3. The template is finished.



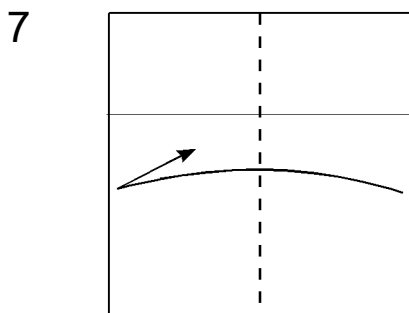
4. Begin by laying your square on top of the template like this, making sure the corners are aligned to the edge of the template and the crease in the way marked with circles here.



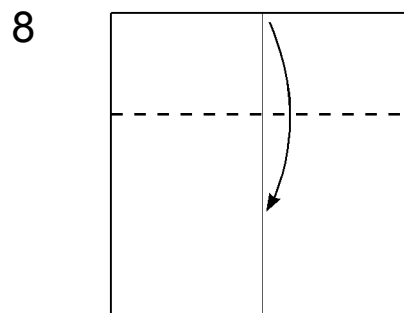
5. Fold the right hand corner inwards as shown. Make sure the two squares don't slip out of alignment as you make this fold.



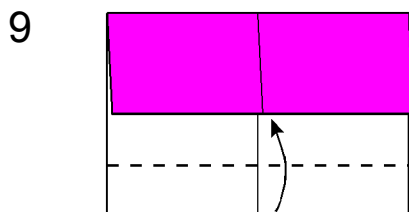
6. Open out the fold made in step 5 and remove the square from the template. Arrange with the crease at the top to look like picture 7.



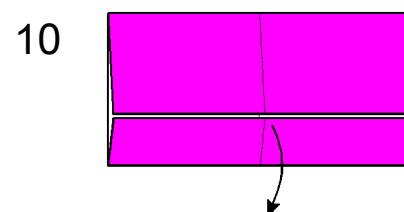
7. Fold in half sideways, then unfold.



8. Fold the top edge downwards using the existing crease.

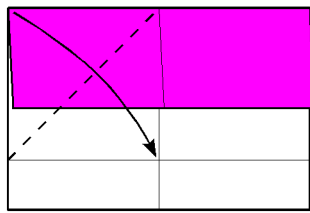


9. Fold the bottom edge upwards to lie against the bottom edge of the front layer.



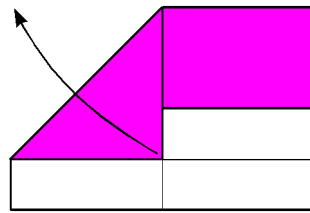
10. Unfold.

11



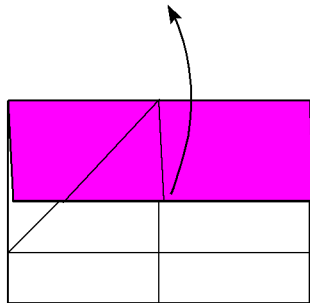
11. Fold the top left corner diagonally inwards like this.

12



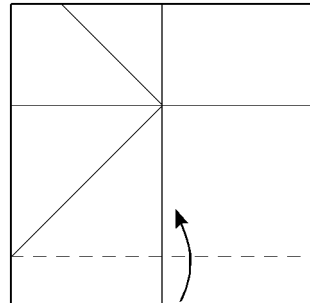
12. Unfold.

13



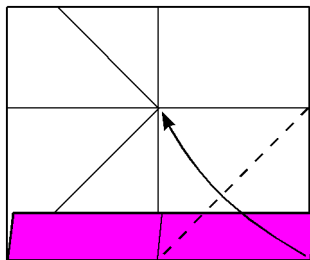
13. Open out the fold made in step 8.

14



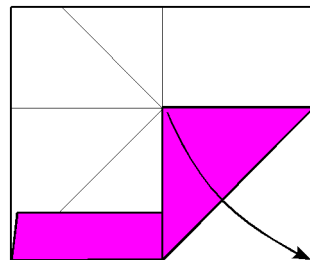
14. Remake the fold made in step 9.

15

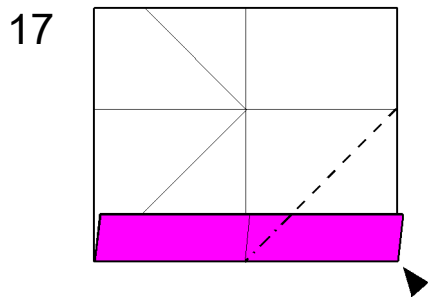


15. Fold the bottom right corner inwards like this.

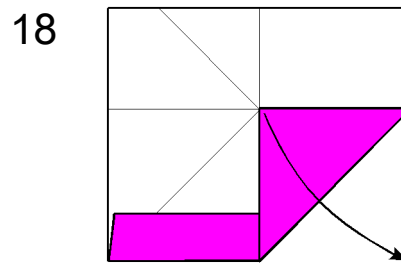
16



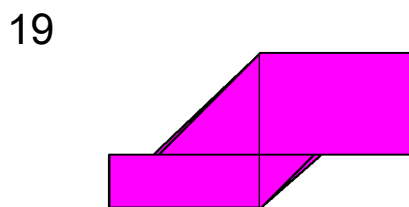
16. Unfold.



17. Turn the bottom right corner inside out in between the other layers using the existing creases.

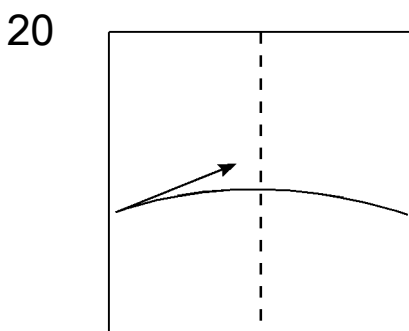


18. Remake the fold made in step 9 while simultaneously turning the top left corner inside out between the other layers using the existing creases as shown here.

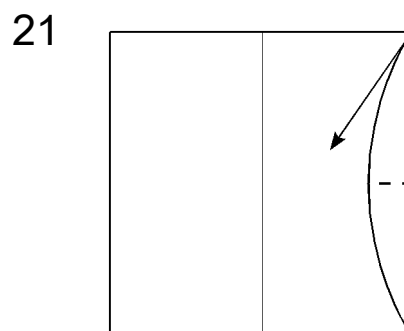


19. The basic Mondrian module is finished.

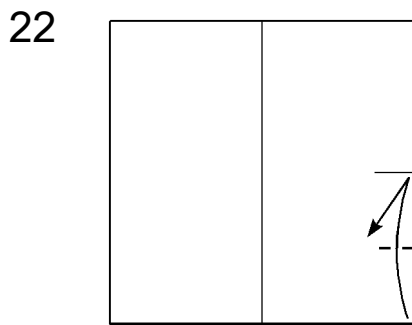
**Folding the basic quarter / three quarters Mondrian module**  
 Mondrian modules are folded from squares. You can use any kind of paper. If you are using irogami begin with your paper arranged white side up.



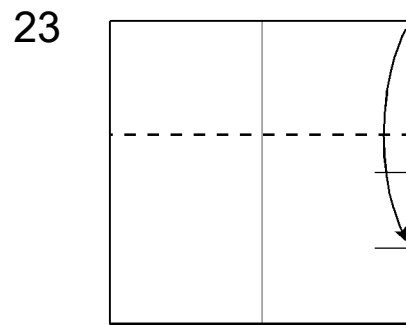
20. Fold in half sideways, then unfold.



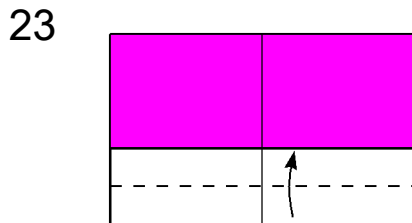
21. Fold in half upwards, then unfold.



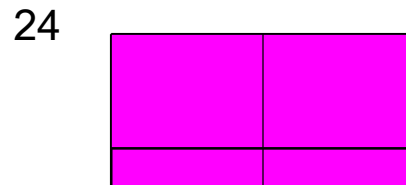
22. Fold the bottom right corner onto the crease made in step 21, then unfold.



23. Fold the top right corner onto the crease made in step 22.



23. Fold the bottom edge upwards to butt against the bottom edge of the front layer.

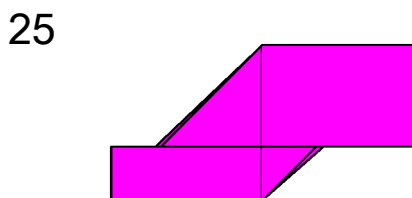


24. Continue with steps 10 through 19 to create the basic module.

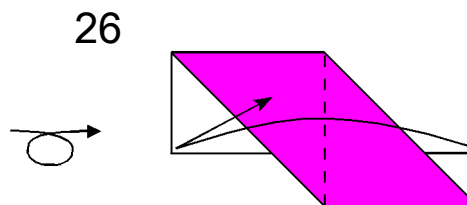
## Constructing the Mondrian Cube

You will need twelve basic modules of the same proportions to construct a cube.

### Configuring the modules

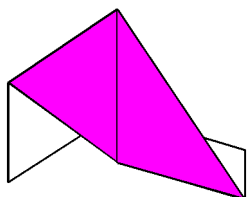


20. Turn over sideways.



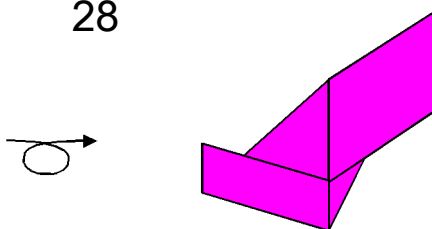
21. Fold in half sideways using the existing crease then unfold to right angles.

27



27. Turn over sideways.

28

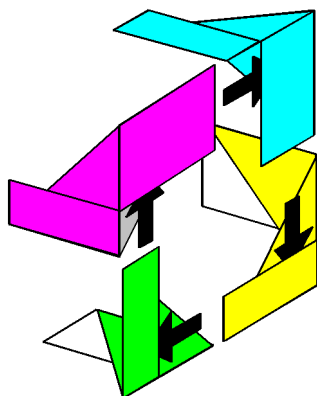


28. Configure all twelve modules to look like this.

### Assembling the four colour Mondrian Cube

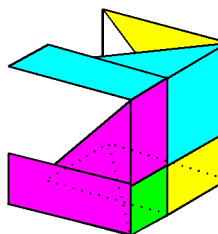
You will need three modules in each of four contrasting but complementary colours.

29



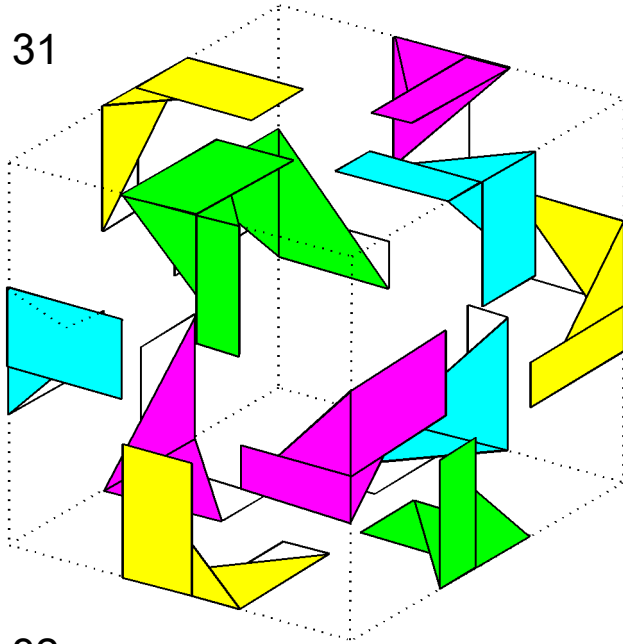
29. Four modules, one of each colour, go together to form one face of the cube.

30



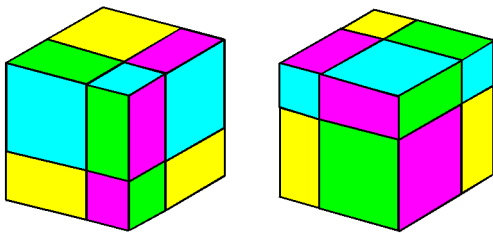
30. The result will look like this.

31



31. Add the remaining modules one by one keeping to the pattern of colours shown here. In this arrangement each colour forms a diagonal zigzag band around the cube.

32

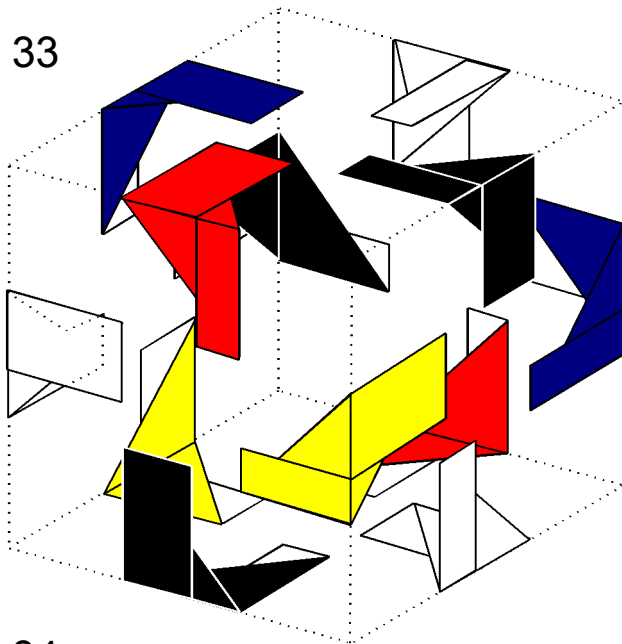


32. The front and back corners of the finished four colour Mondrian Cube will look like this. All the other colourings that are possible with standard 12-part Sonobe Corner-pocket Cubes are also possible with the Mondrian Cube.



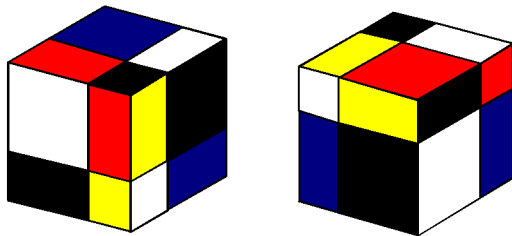
## Assembling the five colour Mondrian Cube

You will need two modules each in red, blue and yellow, and three modules each in black and white.



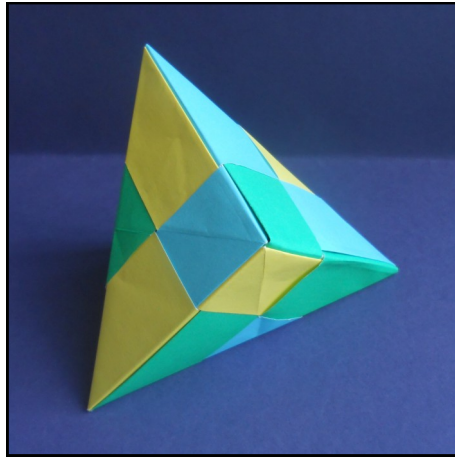
33. The modules go together like this.

34



34. The front and back corners of the finished five colour Mondrian Cube will look like this. Many other five colour patterns are possible.

## Other forms



The 6-part Mondrian Hexahedron



The 24-part Mondrian Stubby Star

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