Wallpaper Groups

(Plane Symmetry Groups)

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Cunningham // Madaus

Click on a pattern to read about it.
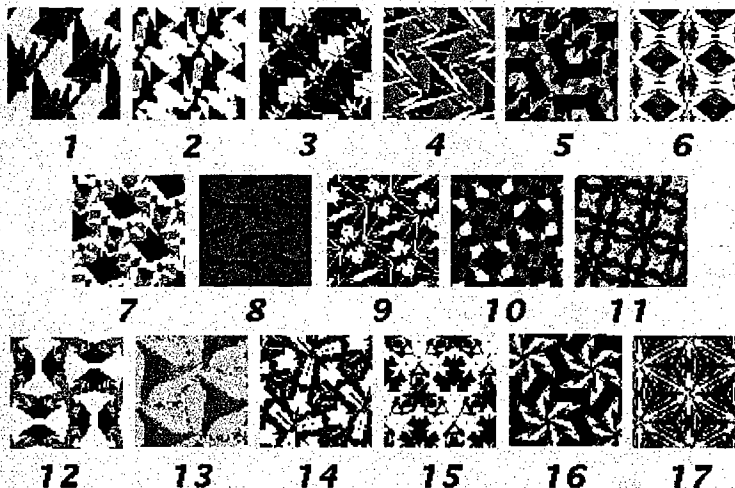
1 2 3 4 5 6

7 8 9 10 11

12 13 14 15 16 17

Welcome!

Some of these pages are quite technical. You might like to look at the first section on transformations of the plane, then skip to the section on the 17 plane symmetry groups to get an idea of the different kinds of patterns. The sections on lattices, on transformation groups and symmetry, and on history are more technical and, perhaps, most appropriate for college-level readers.

The concept of "group" is one of the most important concepts in mathematics, and a nice examples of groups are the wallpaper groups.

We're not really talking about wallpaper here. We're interested in any planar repeating pattern. In fact, the actual pattern isn't as much interest to us as the symmetries of the pattern.