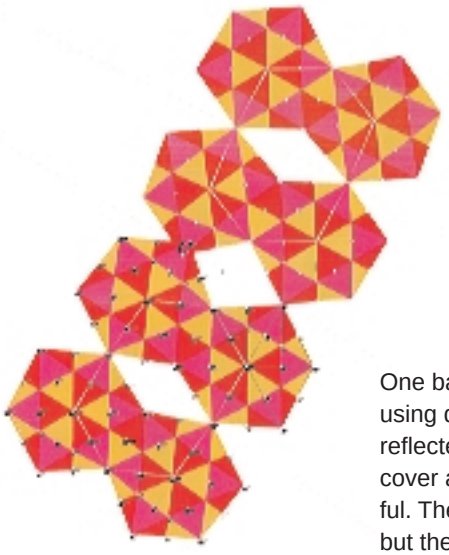


One basic shape has been divided using dilations, then rotated and reflected. It is easily reproduced to cover a surface and commercially useful. The three colors are eye-catching, but the repetitive triangles render it less appealing to the eye.



The design uses both rotations and dilations; yellow and green are the colors. The design can easily be translated across the page, and it would make a pleasant tile or textile sample. In addition, the students have incorporated the extra element of curved lines (arcs).



The design is very pleasing to the eye and has nice color contrast. The student has used rotation well, but the translations were done using different directions and distances, resulting in a picture which is not symmetrical. This was probably not intentional, but the unequal white spaces are not only disturbing to view, but render the design difficult to duplicate on the page and therefore not commercially usable. Some minor adjustments, particularly the use of one translation vector, would correct the problems.



This design is deceptively simplistic. The two colored figures are not in fact congruent, but were created by adding and subtracting pieces from congruent squares in the manner of M. C. Escher, then rotated and translated to produce a tessellation. This design is both simple to recreate and infinitely extendible. It is adaptable to many color combinations, making it a useful design for any number fabric items, although a different set of colors would have had more personal appeal, I think.



Two shapes have been created from one basic trapezoid through the use of reflections and translations. The minimal use of two colors keeps the design from looking too cluttered, rendering it pleasant to look at, and useful as a wall tile design. It is easy to recreate and duplicate across the page.

Following is a students' written explanation of how this design was created.

Create an isosceles trapezoid (shorter base = 4.5cm./10nger base = 7cm./ sides = 2.5)

- Keep reflecting the trapezoids until you have the desired length.
- Reflect the trapezoid over the longer base...then the shorter base...then the longer...
- Reflect the column of trapezoids to create to columns...then three...until you have reached the desired length.
- Delete the longer base of each of the trapezoids. Now you should have overlapping hexagons.
- Color in the diamonds created by the overlapping hexagons. All colors are allowable, but we used yellow and green.

This written description received a score of 15 according to the following criteria:

- easily duplicated by the reader 7
- clear and easy-to-read instructions, with no run-on sentences or spelling errors 5
- typed on a word processor. 3

Total: 15 points