

One Extra Problem

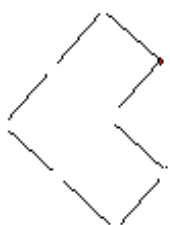


Figure 1

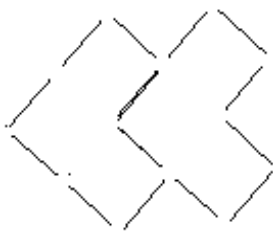


Figure 2

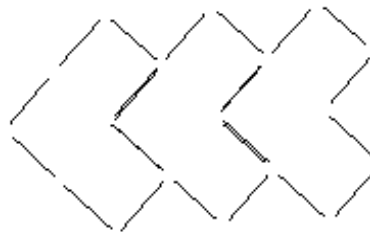


Figure 3

- Imagine a tilted L-shape puzzle piece (Figure 1) made from 8 toothpicks. Notice that its area is 3 square units.
- Add puzzle pieces in the corner of each "L" to form successive figures 2 and 3 of the design.
- In the second figure, the two pieces share two toothpicks so that there are 14 toothpicks instead of 16.
- Make a table with enough columns and rows for the number of toothpicks, perimeter, and area of each of six figures.
- Write a recursive sequence in each column.
- Use the recursive sequence on the graphing calculator to find the number of toothpicks, perimeter, and area of figure 10.
- Find the perimeter and area of the figure made from 152 toothpicks.