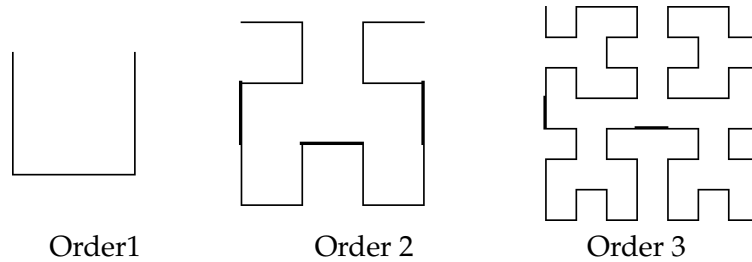

Hilbert Curve

Problem Description

This figure shows Hilbert curves of order one, two, and three:

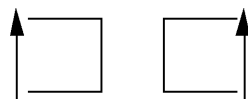


The order one curve consists of three lines on three sides of a square. The order two curve is made from four order one curves in different rotations connected by three unit lines (shown thicker). The order three curve is built from four order two curves connected in the same way.

In general, the order n curve is made this way from four order $n - 1$ curves linked by three lines.

Task

Write a program that accepts as input the order, n , and draws an order n Hilbert curve, suitably scaled, on the screen.



Important Hint

Relates to Objectives

1.1 1.2 1.3 2.1 2.2 2.3 2.4 2.5 2.7 3.3 3.5 4.1 4.5 4.7

(1 point, Individual)