

Flatland Lock

A two dimensional logic and visualisation puzzle

by

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*Based on the ideas from Flatland by Edwin A Abbott
Use any squares, in any yarn
Knit or crochet*

from

Woolly Thoughts

Flatland Lock

This afghan was made several years ago and was never finished off in the way I intended. It was meant to have a border of navy squares all round but works equally well without.

These instructions are far less detailed than our usual patterns, allowing you to use any squares, of any size, in any yarn, in either knit or crochet.

The Design

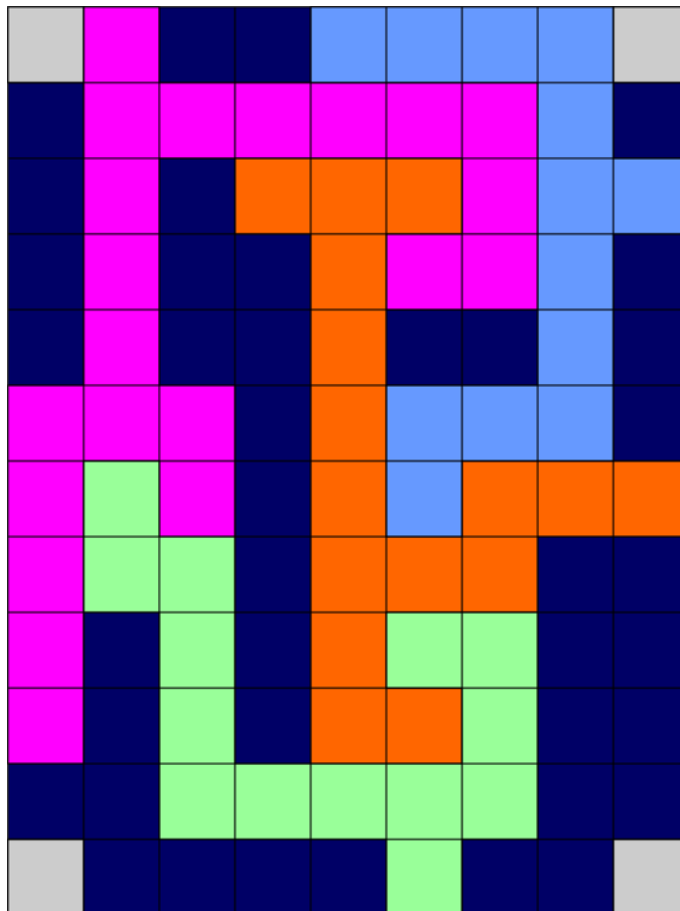
The design is based on a puzzle in *Leonardo's Mirror and Other Puzzles* by Ivan Moscovich. This is what it says in the book.

In the two-dimensional space of Flatland, the bank vault is an ingenious mechanism consisting of four sliding linkages which can move up, down, left, and right only.

The four black squares (ours are grey) are fixed at the corners of the rectangular vault and the sliding linkages cannot cross them.

The object is to remove in succession the four linkages, one on each side of the vault to uncover it completely.

Which piece must be moved first? How many moves will it take to open the vault?



The Squares

The afghan in the photo was made with crochet squares which were stitched together. The method I used is given below.

Alternatively, you could use

- mitred squares,
- diagonally-knit garter stitch squares
- squares on four needles, or circular, knitted outwards from the centre or inwards from the edge
- granny squares

or any other squares of your choice.

You could also make the coloured shapes as single pieces but this requires a bit more planning.

The Size

The grid is 9 squares wide and 12 squares high. Decide what size you want then divide the width by 9 to find the size of the individual squares.

The Yarn

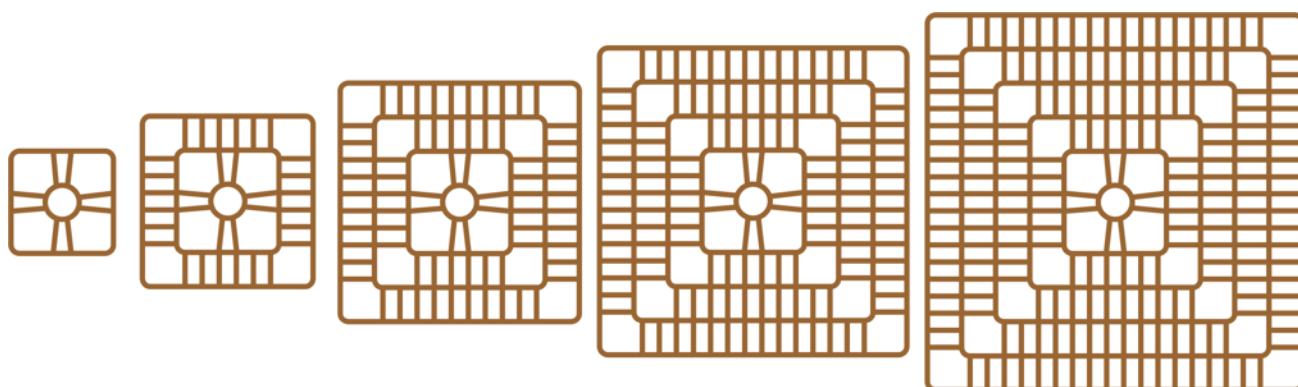
Use any yarn in four main colours, with a fifth colour for the background and a sixth for the posts at the corners of the rectangle.

The amount you will need depends on the yarn you choose and the size of the squares. Make one square in your desired size and calculate your requirements from there.

- pink = 21 times the measured amount
- orange = 16 times the measured amount
- green = 21 times the measured amount
- blue = 13 times the measured amount
- grey = 4 times the measured amount
- navy = 40 times the measured amount

The Method

All squares are alike.

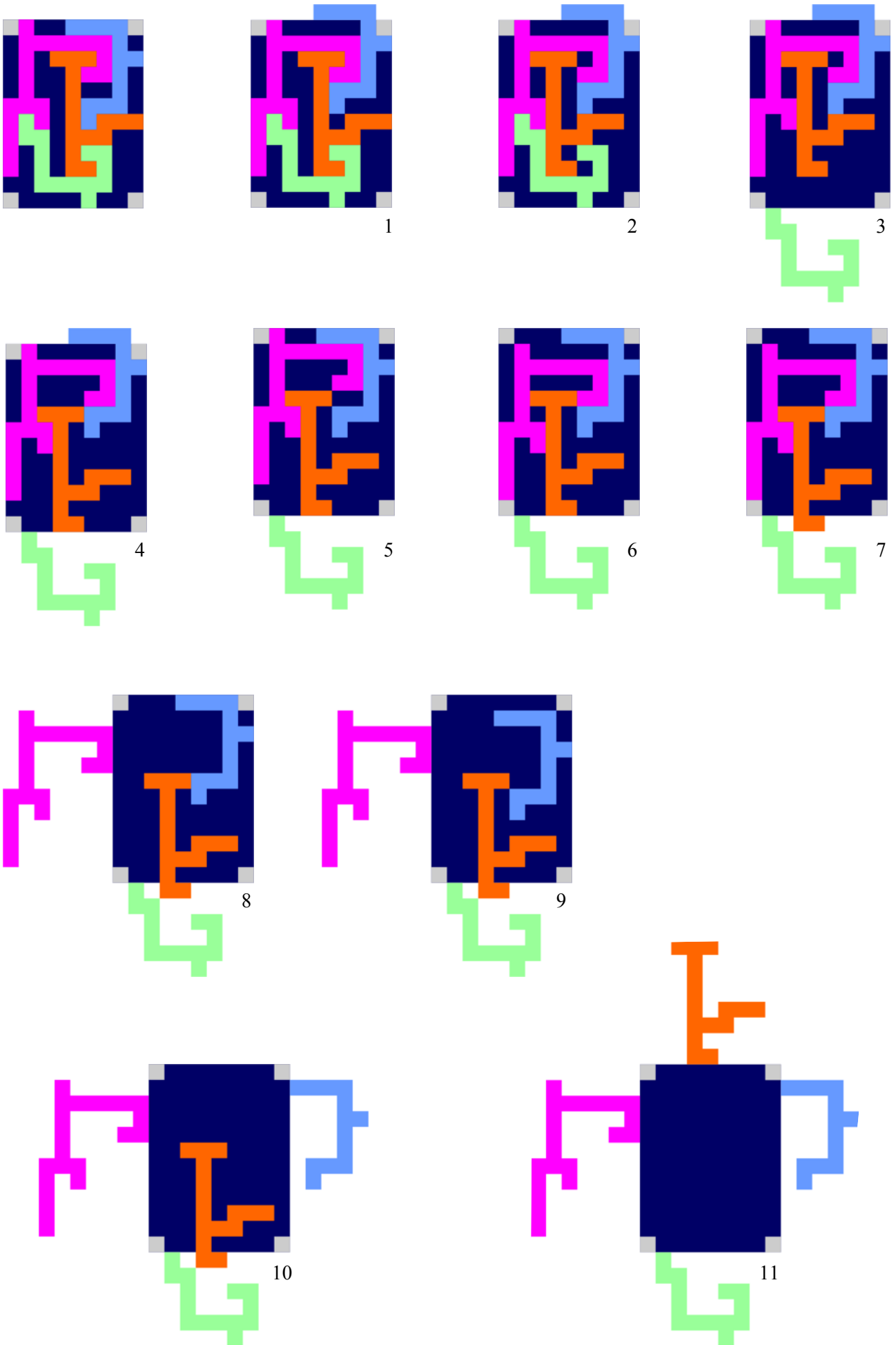


Make 4 chains and join them into a ring with a slip-stitch.

Round 1: Make 3 chains (to take the place of one treble) then work 1 treble into the ring, make 3 chains to be the space to become the corner of the square, work 2 trebles, 3 chains, 2 trebles, 3 chains, 2 trebles, 3 chains. Join to the top of the 3 chains with a slip-stitch, to complete the round.

The corners will become more square when other stitches are added.

Other rounds: Make 3 chains (to take the place of one treble), then work round the square making a treble into the top of every treble on the first round and 2 trebles, 3 chains, 2 trebles into each 3 chain space. When you get back to the start join with a slip stitch as before.



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