

Before starting off

open the document properties (Shift+Ctrl+D)

set default units to mm, set page size to 100 mm / 100 mm

change background colour

disable border shadows

First steps

draw a square with the rectangle tool the size of 100 mm / 100 mm, at (0,0) position with no rounded corners

convert object to path (Ctrl+Shift+C)

draw an octagon with the * tool

-pull handle down while holding Ctrl for perfect alignment

convert object to path

resize to 100 mm / 100 mm and align object to square -by editing position coordinates just with the square, or by using the align and distribute panel (Shift+Ctrl+A)

The construction

convert octagon to guides (Shift+G)

duplicate square (Ctrl+D) convert duplicant to guides

enable snapping of nodes, cusp nodes, smooth nodes, path segments, path intersections, and guides

draw a diagonal rectangle with the pen tool by connecting the right guide intersection points

duplicate it, then rotate the duplicant by 45° with the select tool, by holding Ctrl

convert both paths to guides

and use the pen tool to connect the right intersection points

after that, the guide lines can be deleted

Finishing the pattern

select both objects, duplicate them and group them together (Ctrl+G)

flip the group vertically (V)

ungroup object and delete the duplicant of the square

select original and duplicant, duplicate them and flip them horizontally (H)

select the four objects on top, duplicate them, group them together, and rotate 90°,

then ungroup the object

select all 8 objects, open the fill and stroke panel (Shift+Ctrl+F) and set opacity to 100%,

group objects together, set no fill, a 3 mm stroke, appropriate join and cap styles

duplicate square, and move it to the bottom (End)

select group on top, move to bottom (End)

add square on top to selection (Shift+Click) set clipping, move object to top (Home)

Adding colours

use the pen tool to draw the filled areas, by snapping to path intersections

use duplicating, grouping and mirroring, just with the pattern's strokes for more comfort

set fill colours of your choice, and no strokes

group filled paths together and move them to the bottom (End)

delete the unnecessary square group the two groups together