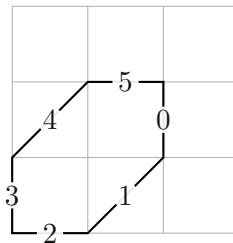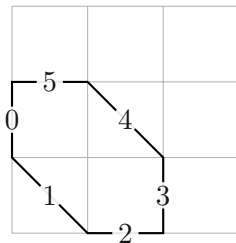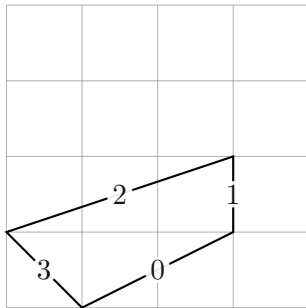# Gluing things from squares

Imagine a gluing of squares

Squares are congruent, and the gluing is *edge-to-edge*

Then the gluing can be drawn on the grid
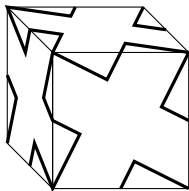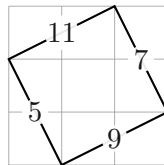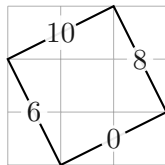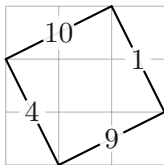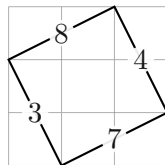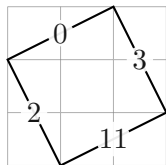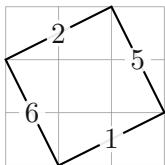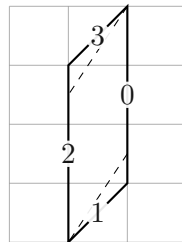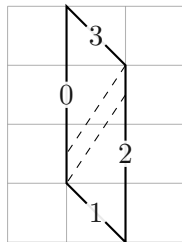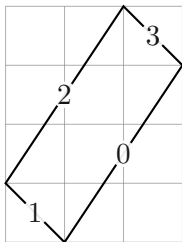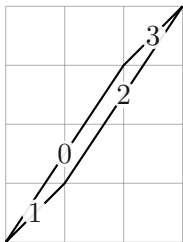
You can glue this from squares
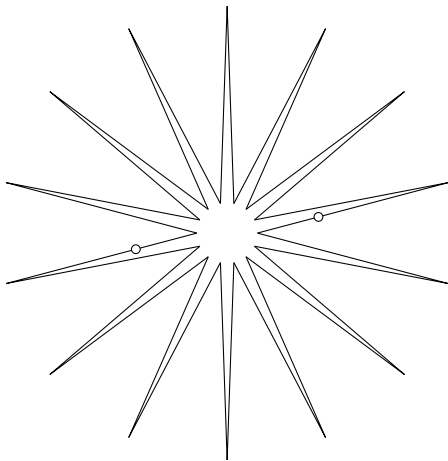
You can glue this from squares

Sometimes it's uncertain what is glued

(a)

(b)

Many things can be glued from a single polygon

$2n$ vertices, $2^{\Omega(n)}$ polyhedra.

In our presentation we find out that

1) There are $O(n^{36})$ polyhedra that can be glued from at most n squares;

2) There are $\Omega(n^3)$ polyhedra that can be glued from at most n squares;

3) There are $O(n^3)$ doubly covered polygons that can be glued from at most n squares;

4) We present an algorithm that classifies all the gluings.