Patches the Cat
a print-and-build paper sculpture kit

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Here’s the body of Patches the Cat. We’ve included a few tips to get you started. Read the tips before cutting the piece!

1. begin by joining the yellow tabs to the edges right next to them

2. then join both aqua tabs to this face

3. the dark blue tab joins to the dark blue face

4. the pink tab joins to the pink face

5. the long purple tab joins to the purple face at the opposite end

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The purple tab joins to the purple face on the opposite side.

The green tab joins to the green face on the opposite side.

Join the orange tab to the orange face, the pink tab to the pink face, and the purple tab to the purple face. (Do the purple face last.)

Glue the finished tail to the back of the body.

First join this tab to the pink triangle, then glue the rectangle to the remaining tabs.

Glue ear here.

Glue ear here.

Glue to head.

Glue to head.
Patches the Cat is a mathematical creature ... his head is made from a polyhedron called the rhombicuboctahedron (pronounced RHOM-BEE-CUBE-OCTA-HEE-DRON). This polyhedron is made of squares and equilateral triangles.

His body is the same shape as his head, but the shape has been stretched out to make it longer. Notice how the squares have turned into rectangles and how the triangles no longer have sides that are the same length. Patches' ears are pyramids.

The cat's tail is made by slicing through part of the same shape as the body. Can you see how we got the shape?

Visit us on the web at www.hypergami.com to find out more about polyhedra and polyhedral sculpture!

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