

When we tile the plane with congruent copies of one figure, we make a **tessellation**.

M.C. Escher was a famous Dutch artist. He designed many different tessellations.



You will create two designs in the Escher style. The first design is in the style of *Reptiles*, on page 268.

Part 1

Use square dot paper or grid paper.
Tile the plane with a figure of your choice.
Sketch a design on one figure.
Repeat the sketch until every figure in the plane has the design.
Use transformations to describe how to generate the design beginning with one tile.

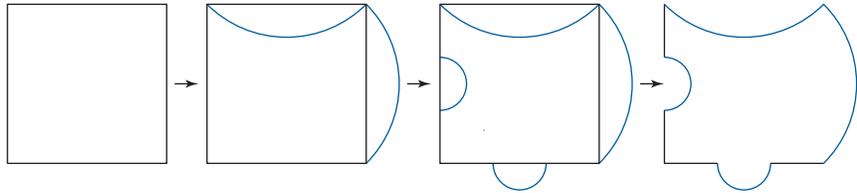
You could start with a rectangle, parallelogram, or regular hexagon, instead.

Part 2

Start with a square. Draw congruent curves on 2 sides.

A curve that goes “in” on one side must go “out” on the other side.

Draw different congruent curves on the other 2 sides.



Check List

Your work should show:

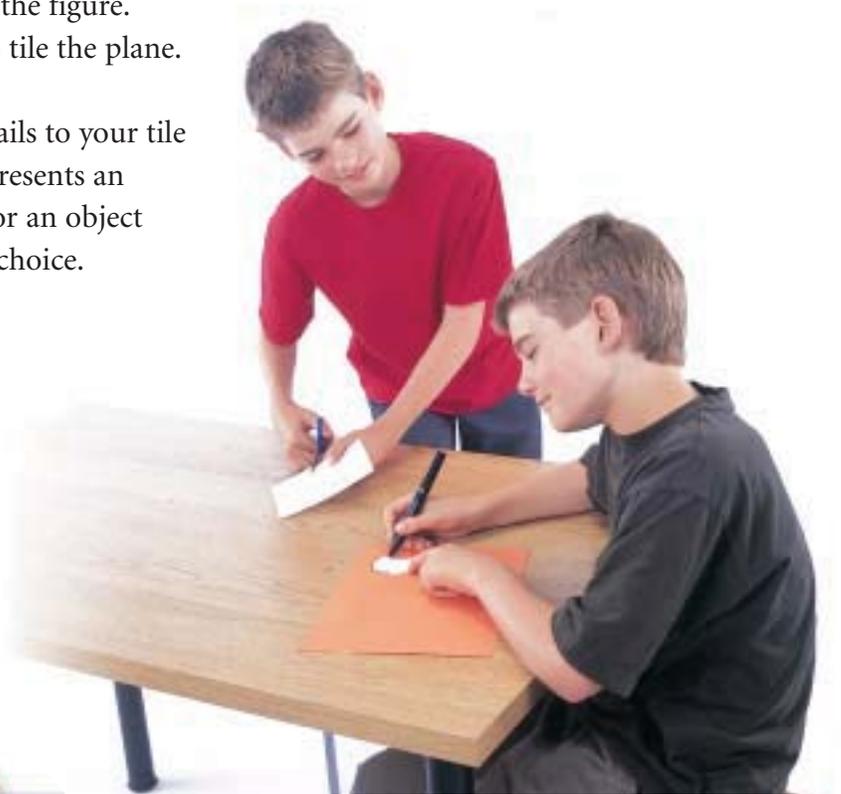
- ✓ the initial tile you created for each design
- ✓ the designs you created
- ✓ how you used transformations to create the designs
- ✓ the correct use of mathematical language

Trace the new figure on cardboard.

Cut out the figure.

Use it to tile the plane.

Add details to your tile so it represents an animal or an object of your choice.



Reflect on the Unit

How are transformations related to congruent figures?
Include diagrams in your explanation.