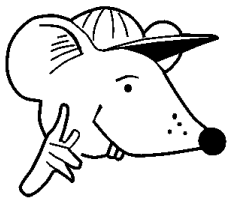
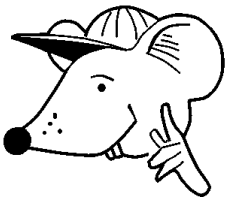


MATHEMATICS



Y3 Geometry

3650

Recognise line symmetry

Equipment

Paper, pencil, ruler
Mirror, scissors, thin card

MathSphere

Concepts

Symmetry is continued in year 3. Children should use and read terms such as:

line of symmetry
mirror line
reflection

Mirrors are essential for this work so that children can see the reflection of the shape in the mirror - they often find great difficulty predicting the mirror image without this help.

Whether shapes are symmetrical can be tested using a mirror, and a line of symmetry can be drawn where the mirror has been placed.

Further practical work should be continued, developing from that covered in years 1 and 2, such as making symmetrical patterns using ink blots or paint across a folded edge.

Other symmetrical patterns can be made with cubes, sticky gummed paper, plastic shapes etc.

Children should be encouraged to find examples of pictures, signs, letters of the alphabet etc which have a line of symmetry and to make a scrapbook up of these.

Sketching the other half of a shape is very difficult, but a few examples have been included in this module. They can also create their own 'half' pictures and try to draw the mirror image.

Lines of symmetry

Some letters of the alphabet have lines of symmetry.
Others don't.
See how many letters have a line of symmetry.
Draw the line on the letter.
I've done A for you! Yesssss!

A B C D E

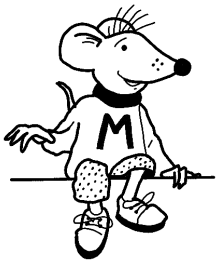
F G H I J K

L M N O P

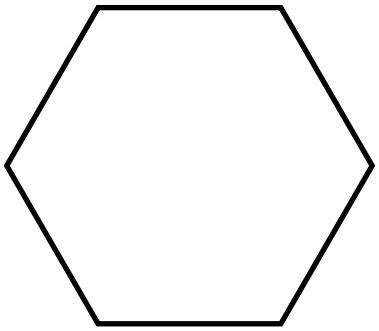
Q R S T U

V W X Y Z

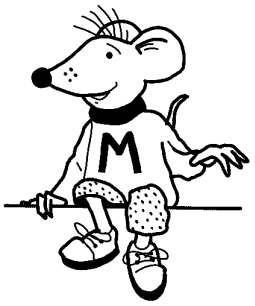
Hexagon symmetry

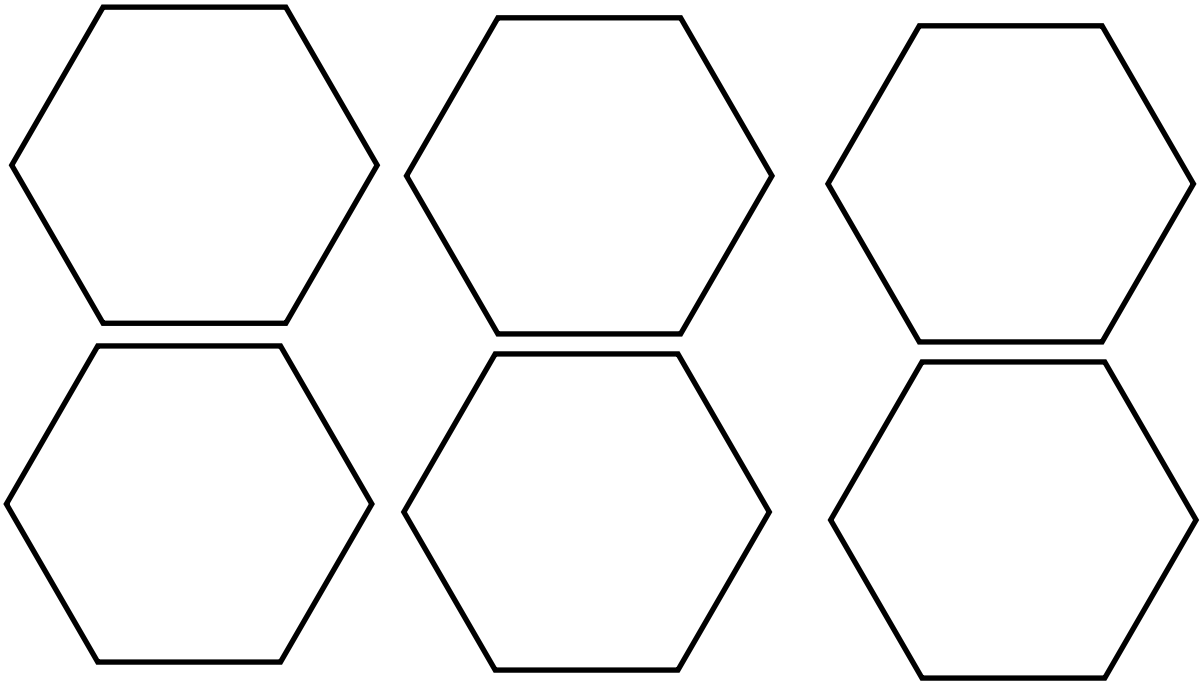


Look at the hexagon below. How many lines of symmetry can you find?



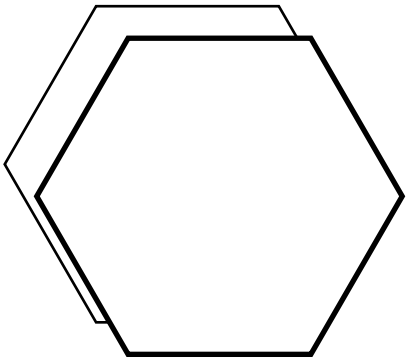
You should be able to find quite a few.





Hexagon symmetry - rotational (extension)

A hexagon has rotational symmetry.
You can use this to make some interesting patterns.
Try this:

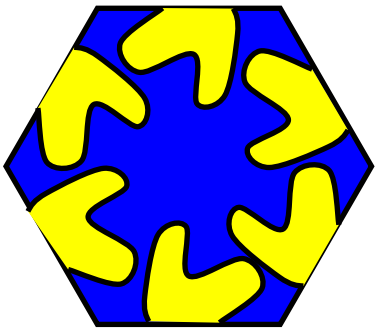


Cut a regular hexagon out of thin card.

Draw round it on a piece of paper.

Now cut a shape out of one side of the hexagon.

Fit the cut out hexagon into the outline you drew and draw round the cutout piece.



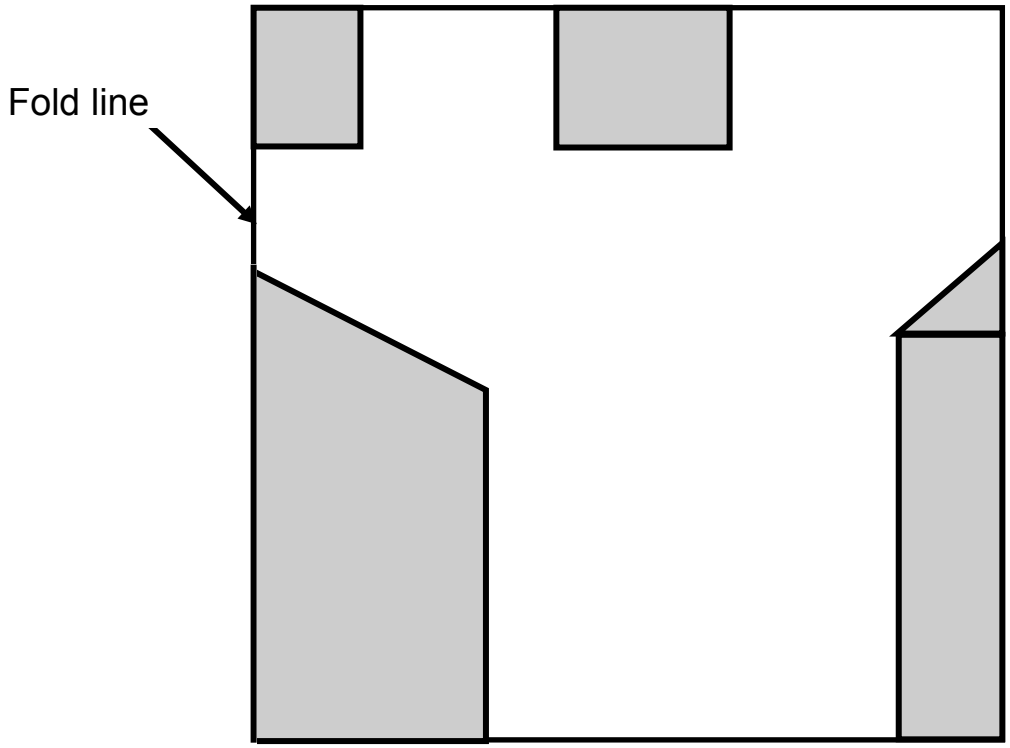
Rotate the hexagon and repeat drawing round the cutout on each side.

Colour the pattern.

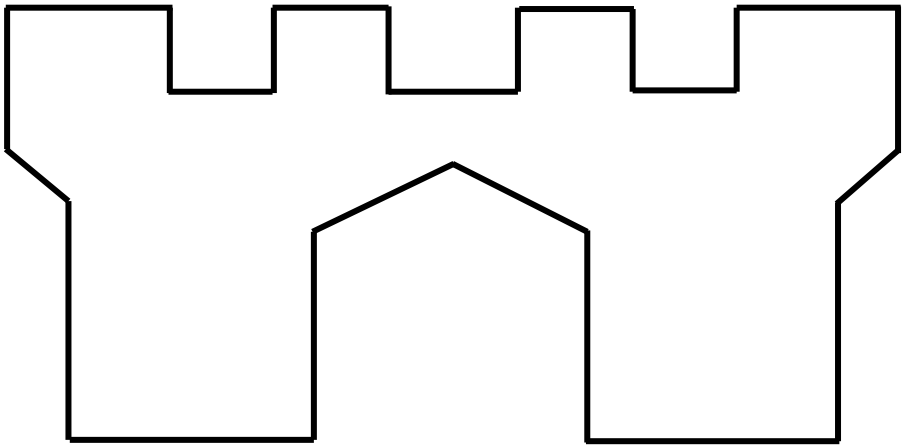
Try again with a different sized cutout.
Does the new pattern have any lines of symmetry?
Does it have rotational symmetry?

Cut out symmetrical shapes

Fold a piece of paper in half and draw in the shaded parts with a ruler.



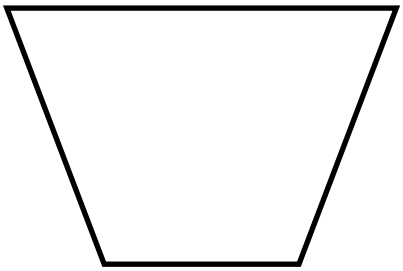
Keep the fold and cut out the shaded parts.
Open it out and it should look like a castle.

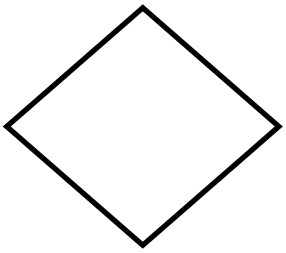


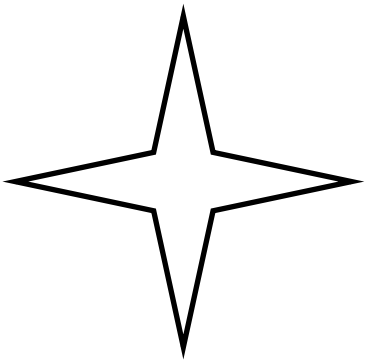
Put in some windows.
Now try and make your own symmetrical building.

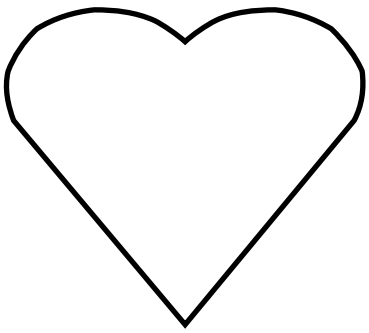
Symmetrical shapes

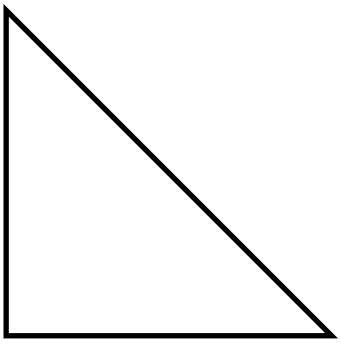
Some of these shapes have a line of symmetry and some have more than one
See if you can draw in the correct lines.

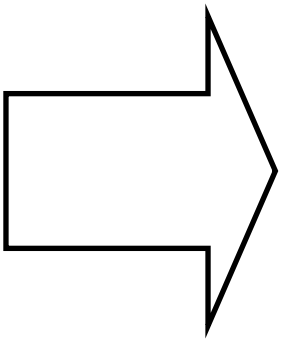






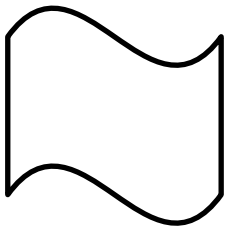


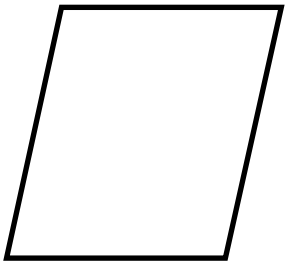


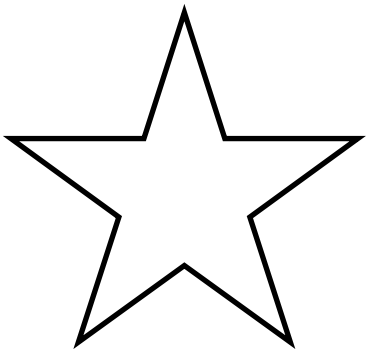


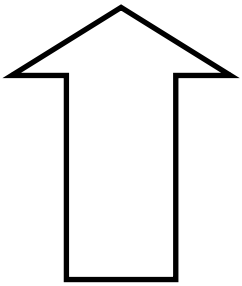
Symmetrical shapes

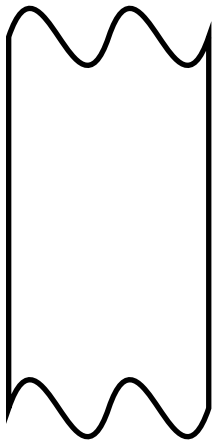
Some more shapes to put the lines of symmetry on.
Be careful - not all the shapes have lines of symmetry!

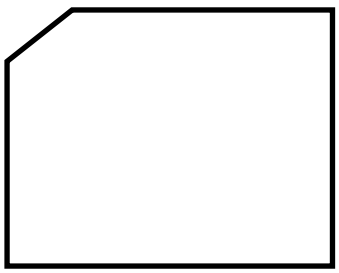


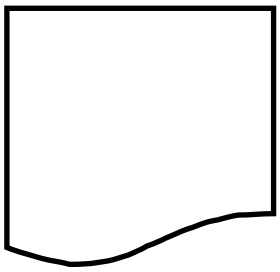








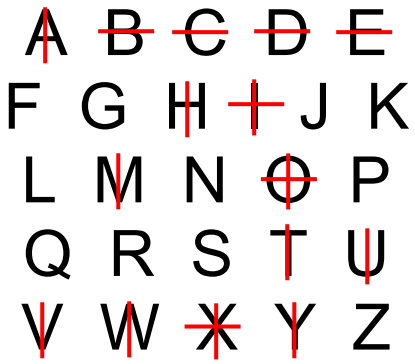




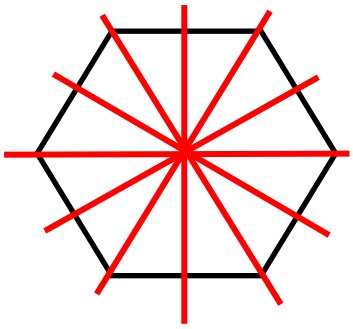
Can you draw the reflection of each of these?

Answers

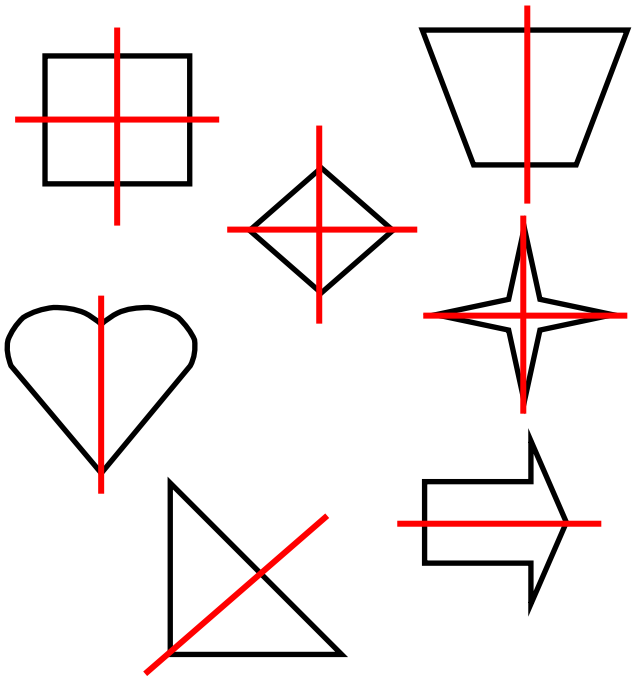
Page 3



Page 4



Page 7



Answers cont.

Page 8