

Businesses ask graphic designers to create **logos** which they use on their products and advertisements.

This has
1 line of
symmetry.

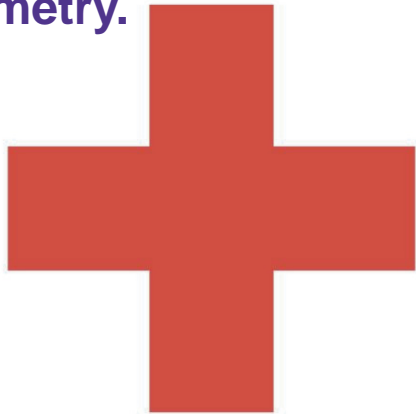


Hull
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Many commercial designs make use of symmetry for their overall shape, or for details within the design.

This has 4 lines of
symmetry.



This has no
lines of
symmetry.
It has rotational
symmetry order 5.

Research using the internet to find logos which have different symmetries. In each case, print out or sketch the design and describe its symmetries.

Complete these **symmetric logo** designs

in each case one sixth is already completed.

6 lines of symmetry

3 lines of symmetry

no line symmetry
rotational symmetry order 6

digital design

Digital design : Designing a logo

Description

Most graphic designers work in the commercial sector. This topic gives a window onto an aspect of their work: designing organisational logos.

Activity 1: Looking for symmetry

Activity 2: Using symmetry worksheet

Activity 3: Creating a logo

Looking for symmetry provides an opportunity to search for symmetry in commercial and other logos and to discuss the mathematical features found. Pupils can be encouraged to develop the associated mathematical language and then invited to present their findings to the class.

The **Using symmetry worksheet** is an exercise in using symmetrical properties to reproduce previously designed logos. Some pupils will find card mirrors helpful in reproducing the line symmetry patterns and may also benefit from using tracing paper in creating and checking their rotational symmetries.

Creating a logo complements this activity by giving pupils a free hand in using line and rotational symmetry to create their own logo. Tracing paper, angle measurers and pairs of compasses will support pupils attempting the more difficult challenge of producing designs which have rotational symmetry but no line symmetry and will require calculating angles at a point.

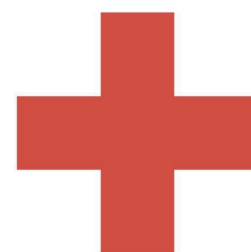
Resources

Tracing paper, colours, angle measurers, pairs of compasses, isometric paper.

Good quality card mirrors (45mm by 137mm) in packs of 10 are available from Tarquin at <http://www.tarquin-books.demon.co.uk/>



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The mathematics

Looking for symmetry provides an opportunity to undertake internet research and to examine and use the language of symmetry.

Using symmetry worksheet and **Creating a logo** encourage pupils to grapple with both line symmetry and rotational symmetry, including thinking about angles at a point.



Yorkshire and the Humber
regional Fairtrade project