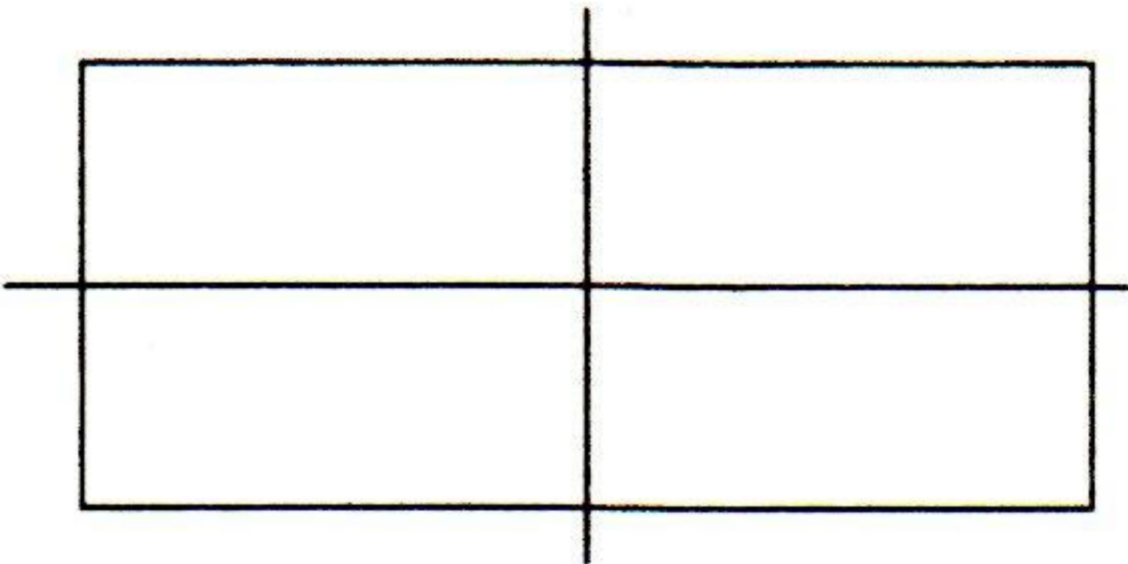# Symmetry

Symmetry: Symmetry is where a shape or picture can be put in different positions that look exactly the same. There are three types of symmetry.

1. Line Symmetry- Draw a mirror line (or more than one) across a picture and both sides will fold exactly together.

2. Plane Symmetry- The flat shapes have mirror line but solid 3-D objects have a plane of symmetry and shapes on both sides must be exactly same.

3. Rotational Symmetry- When you can Rotate the shape or drawing into different positions that all look exactly the same.
(eg.)
Regular Polygon- A regular polygon is one where all the sides and angles are the same.

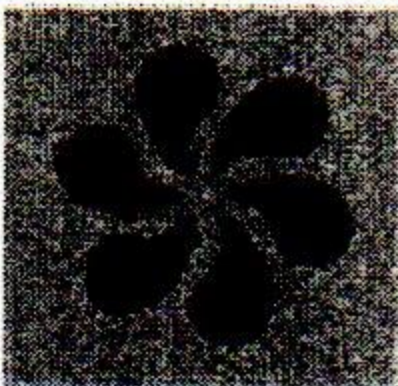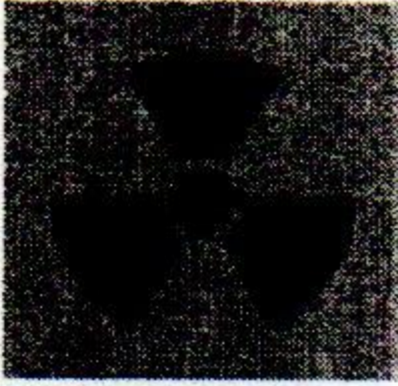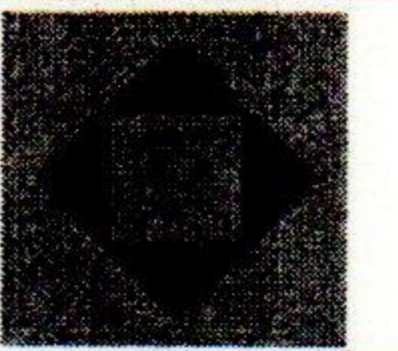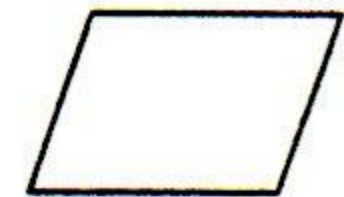| Triangle (3 equal sides)	Square (4 equal sides)	Hexagon (6 equal sides)
Lines of symmetry- 3	Lines of symmetry- 4	Lines of symmetry- 6
Rotational symmetry- order 3	Rotational symmetry- order 4	Rotational symmetry- order 6

Exercise: 12

Q1. Mark in all the lines of symmetry. Also say what the rotational symmetry is for each one.

Letters	Reflective Symmetry	Rotational symmetry	Letters	Reflective Symmetry	Rotational symmetry
H			S		
T			M		
K			L		

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Q2. Draw and mark the lines of symmetry and order of rotational symmetry in the following shapes.

a) Rectangle	b) Square
c) Equilateral Triangle	d) Regular Pentagon

Q3. Write the Reflective symmetry and the Order of the rotational symmetry in the table.

Figures	Reflective Symmetry	Rotational symmetry	Figures	Reflective Symmetry	Rotational symmetry

Q4. How many lines of symmetry and the order of rotational symmetry are there in please complete the table.

Polygon	No. of sides	Reflective Symmetry	Rotational Symmetry
Triangle			
Square			
Rectangle			
Parallelogram			
Rhombus			
Kite			
Octagon			
Hexagon			