Chapter 14

Symmetry

NOTES:

A figure has a line symmetry if there is a line about which the figure may be folded so that the two parts of the figure will coincide. Like this figure.

The regular polygon are symmetrical figures and hence their lines of symmetry are quite interesting .

Each regular polygon has as many lines of symmetry as it has sides .

A shape has line symmetry when one half of it is the mirror image of the other half A mirror line , thus , helps to visualise a line of symmetry.

ROTATIONAL SYMMETRY :   Some objects look exactly the same even after rotating through some angles. They are said to have rotational symmetry.

The rotation of a body turns it about a fixed point. This fixed point is the centre of rotation.

Windmill is a good example. When we rotate it by 90^0 about a fixed point, it looks exactly the same.

In a full turn, there are precisely four positions where the windmill looks exactly the

 same. Because of these positions we have rotational symmetry of order 1 ,   order 2, order 3 and order 4 . The positions make 90^0 , 180^0 , 270^0 and 360^0 with the initial positions respectively .

 The angle is made in clockwise direction.

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