

MATHEMATICS

Class-7th

Chapter-14

Symmetry

Exercise-14.1

Part-II

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Q. 7. State the number of lines of symmetry for the following figures:

- (a)** An equilateral triangle
- (b)** An isosceles triangle
- (c)** A scalene triangle
- (d)** A square
- (e)** A rectangle
- (f)** A rhombus
- (g)** A parallelogram
- (h)** A quadrilateral
- (i)** A regular hexagon
- (j)** A circle

Sol.

	Figures	Numbers of lines of symmetry
(a)	An equilateral triangle	Three lines of symmetry
(b)	An isosceles triangle	Only one line of symmetry
(c)	A scalene triangle	No line of symmetry
(d)	A square	Four lines of symmetry
(e)	A rectangle	Two lines of symmetry
(f)	A rhombus	Four lines of symmetry
(g)	A parallelogram	No line of symmetry
(h)	A quadrilateral	No line of symmetry
(i)	A regular hexagon	Six lines of symmetry
(j)	A circle	infinitely many lines of symmetry.

Q. 8. What letters of the English alphabet have reflectional symmetry (*i.e.*, symmetry related to mirror reflection) about:

- (a) a vertical mirror
- (b) a horizontal mirror
- (c) both horizontal and vertical mirrors.

Sol. Letter of the English alphabet having reflectional symmetry across:

- (a) a vertical mirror
A, H, I, M, O, T, U, V, W, X, Y
- (b) a horizontal mirror
B, C, D, E, H, I, K, O, X
- (c) Both horizontal and vertical mirrors
O, X, I, H



Q. 9. Give three examples of shapes with no line of symmetry.

Sol. Three examples of shapes with no line of symmetry are:

- (1) A Scalene triangle
- (2) A parallelogram
- (3) Trapezium
- (4) 'L' shaped buliding.



Q. 10. What other name can you give to the line of symmetry of:

- (a) an isosceles triangle?
- (b) a circle?

Sol. Other name to the line of symmetry of

- (a) an isosceles triangle are **median**.
- (b) a circle are **diameter**.