

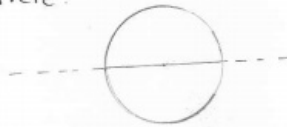
chapter-18 Symmetry Exercise-18.1

Solution - 01:-

- (i) 3 Lines of symmetry for An equilateral triangle.
- (ii) one Line of symmetry for An isosceles triangle.
- (iii) 0 Lines of symmetry for A scalene Triangle.
- (iv) 2 Lines of symmetry for A rectangle.
- (v) 2 Lines of symmetry for A rhombus.
- (vi) 4 Lines of symmetry for A square.
- (vii) 0 Lines of symmetry for A parallelogram.
- (viii) 0 Lines of symmetry for A quadrilateral.
- (ix) 5 Lines of symmetry for A regular Pentagon.
- (x) 6 Lines of symmetry for A regular hexagon.
- (xi) Infinitely many Lines of Symmetry for A circle.
- (xii) one Line of symmetry for A semi-circle.

Solution - 02:-

- (i) Altitude is the Line of symmetry of An isosceles Triangle.
- (ii) A circle is the +
- (iii) Diameter is the Line of symmetry of An circle.



Solution - 03:-

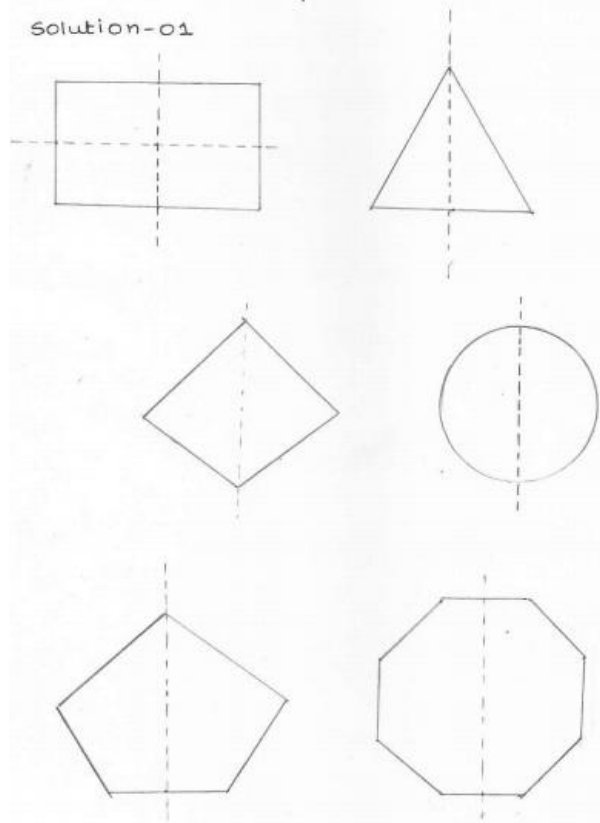
Three examples of shapes with no Line of symmetry are

- (i) Parallelogram
- (ii) A scalene Triangle
- (iii) A quadrilateral.

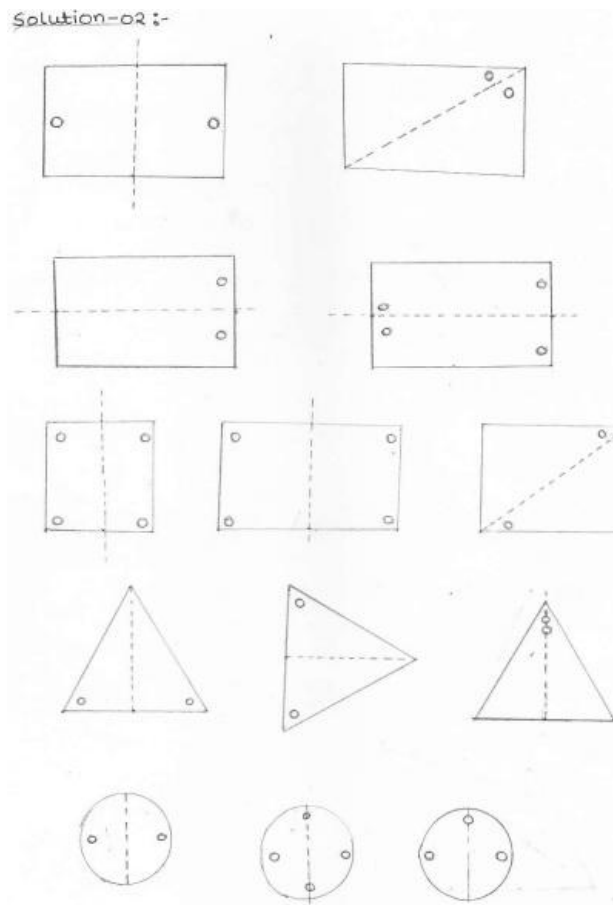
chapter-18 Symmetry Exercise-18.2

Exercise-18.2.

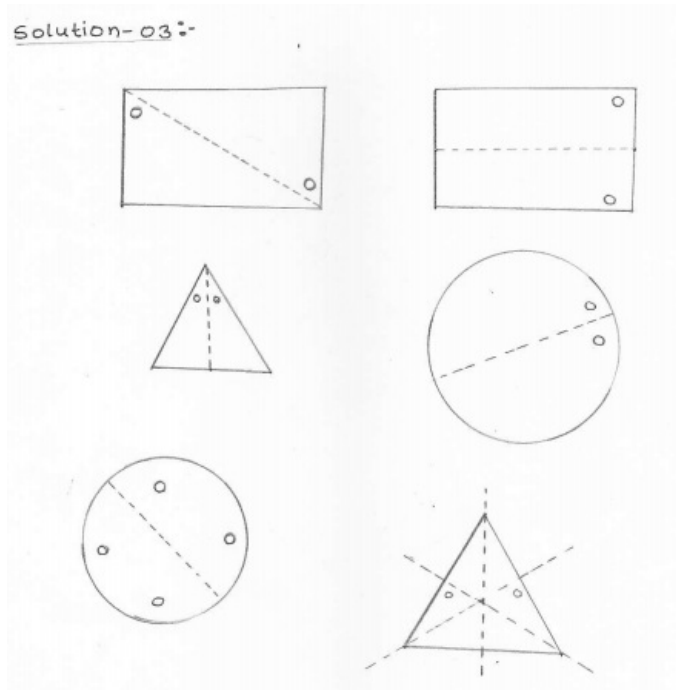
Solution-01



Solution-02:-



Solution-03:-



Exercise-18.3

Exercise-18.3.

Solution 1:-

- (i) order of rotational symmetry is '4'
- (ii) order of rotational symmetry is '3'
- (iii) order of rotational symmetry is '3'
- (iv) order of rotational symmetry is '4'
- (v) order of rotational symmetry is '2'
- (vi) order of rotational symmetry is '4'
- (vii) order of rotational symmetry is '5'
- (viii) order of rotational symmetry is '6'
- (ix) order of rotational symmetry is '3'

Solution-2:-

An equilateral triangle, A square have both Line Symmetry and rotational symmetry.

Solution-03:-

→ A semicircle has a Line symmetry but does not have rotational symmetry

(or)

→ An isosceles triangle has a Line of Symmetry but does not have rotational symmetry.

Solution-04:-

→ A scalene Triangle has neither Line of Symmetry nor a rotational Symmetry.

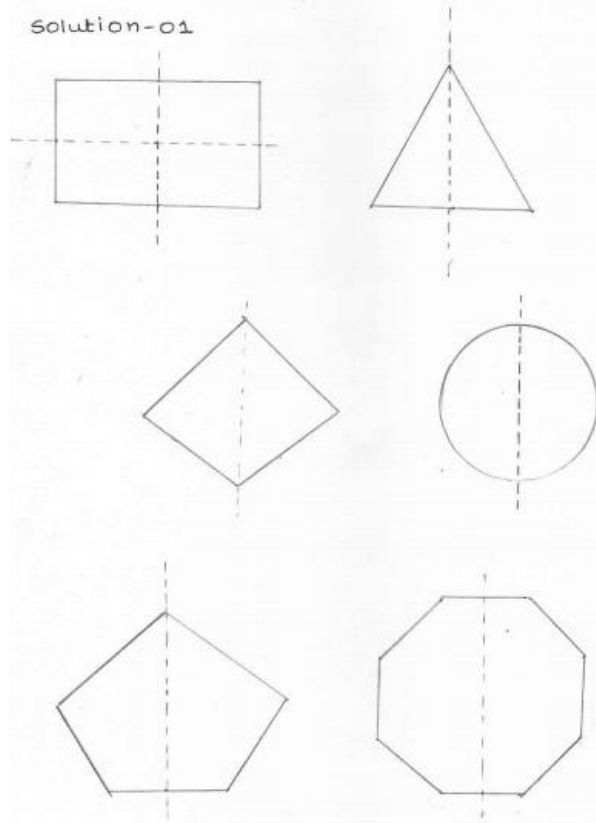
Solution-05:-

(i) English Alphabet which has no Line of Symmetry is 'Z'

(ii) English Alphabet which has rotational symmetry of order 2 is 'N'

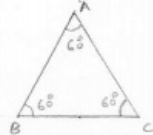
Exercise-18.2.

Solution-01

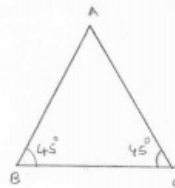


Solution-07:-

(i) An equilateral Triangle



(ii) An isosceles Triangle.



Solution-08:-

FIGURES	Centre of Rotation	Order of Rotation	Angle of Rotation
Square	Point of intersection of line segments joining the mid points of opp sides	4	90°
Rectangle	Point of intersection of the line segments joining the mid points of opp sides	2	180°
Rhombus	Point of intersection of diagonals	2	180°
Equilateral Triangle	Point of intersection of angle bisectors i.e. centroid	3	120°
Regular hexagon	Centre of hexagon	6	60°
circle	Centre of circle	Unlimited	Any Angle
Semi-circle	Nil	Nil	Nil

Solution-09:-

English Alphabet Letter	Line Symmetry	Number of Lines of symmetry	Rotational Symmetry	Order of rotational symmetry
Z	No	0	Yes	2
S	No	0	Yes	2
H	Yes	2	Yes	2
O	Yes	4	Yes	2
E	Yes	1	No	0
N	No	0	Yes	2
C	Yes	1	No	0