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.

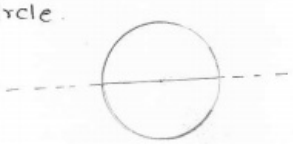
(xii) one Line of symmetry for A semi-circle.

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 Any circle.



Solution-03:-

Three examples of shapes with no Line of symmetry are

(i) Parallelogram

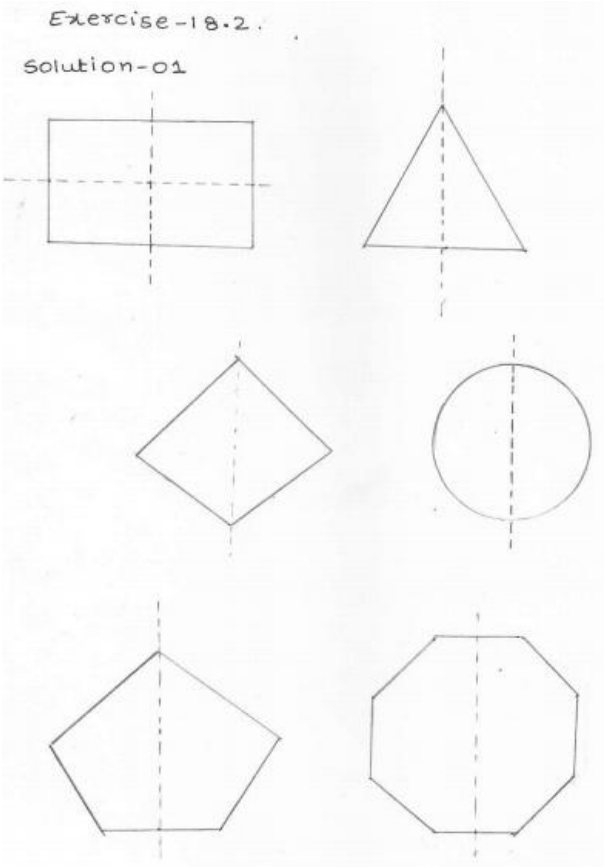
(ii) A scalene Triangle

(iii) A quadrilateral.

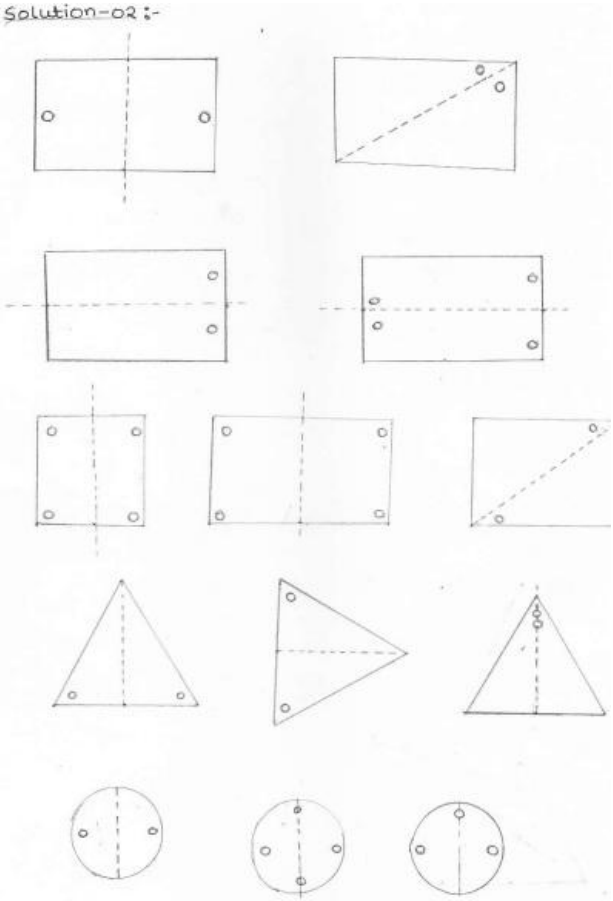
chapter-18 Symmetry Exercise-18.2

Exercise-18.2.

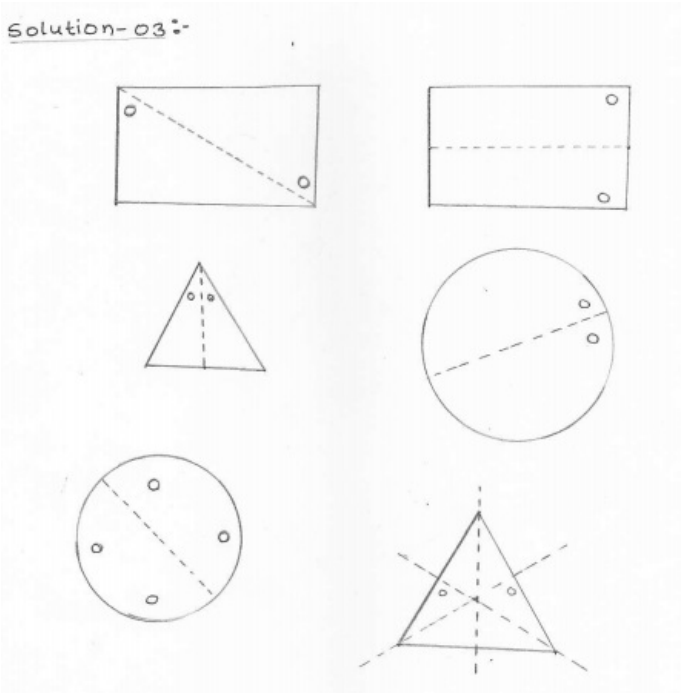
Solution-01



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.

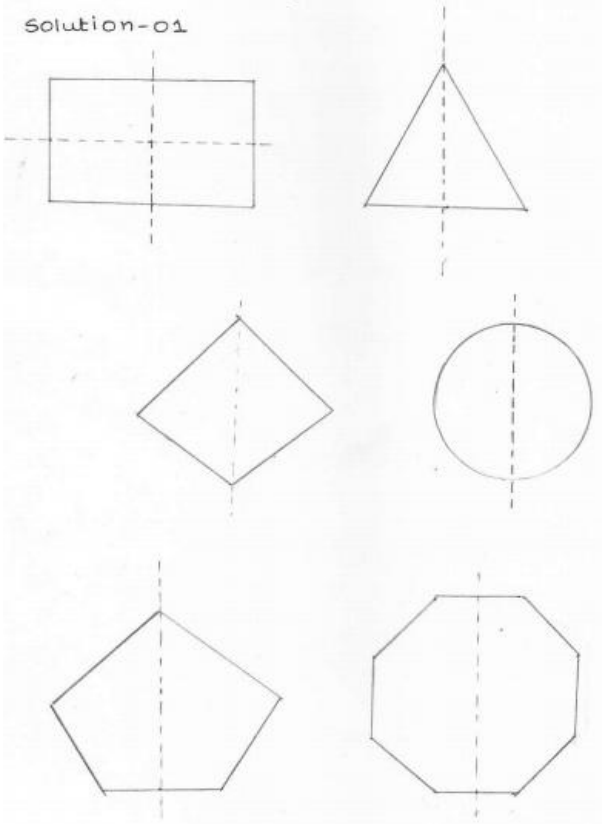
Solution-05:-

(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.

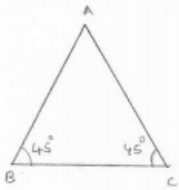
Solution-01



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°
Rhombous	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	Nill	Nill

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.