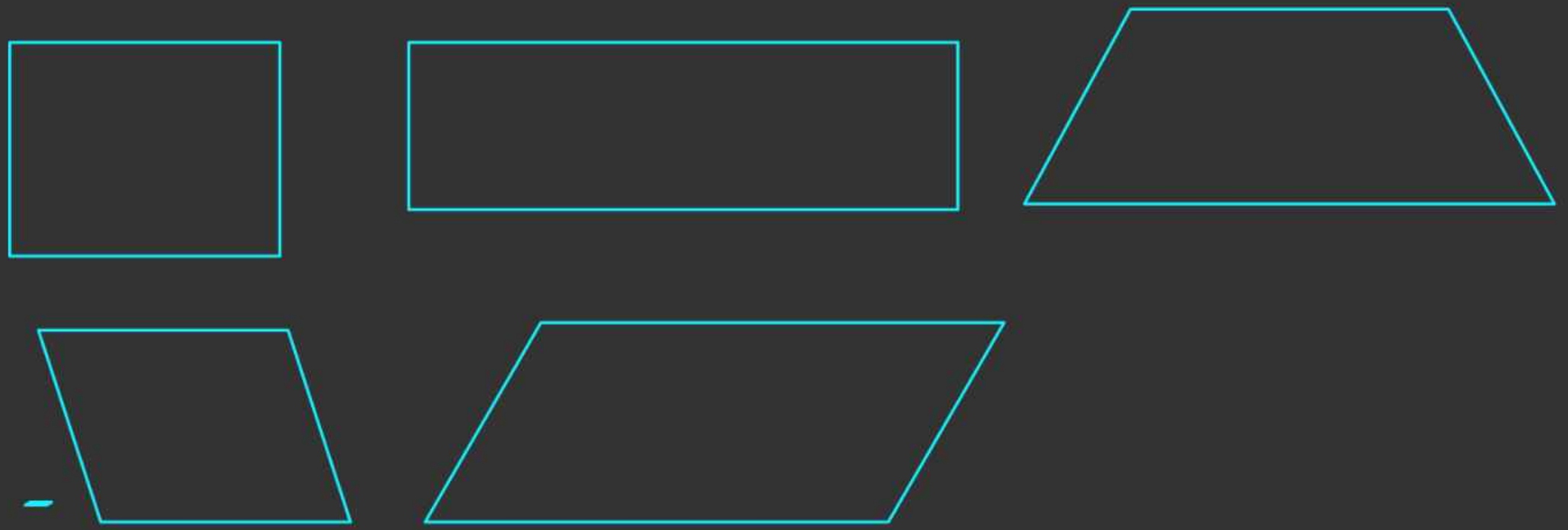
DSSSB TGT PART(A+B)

MATHS

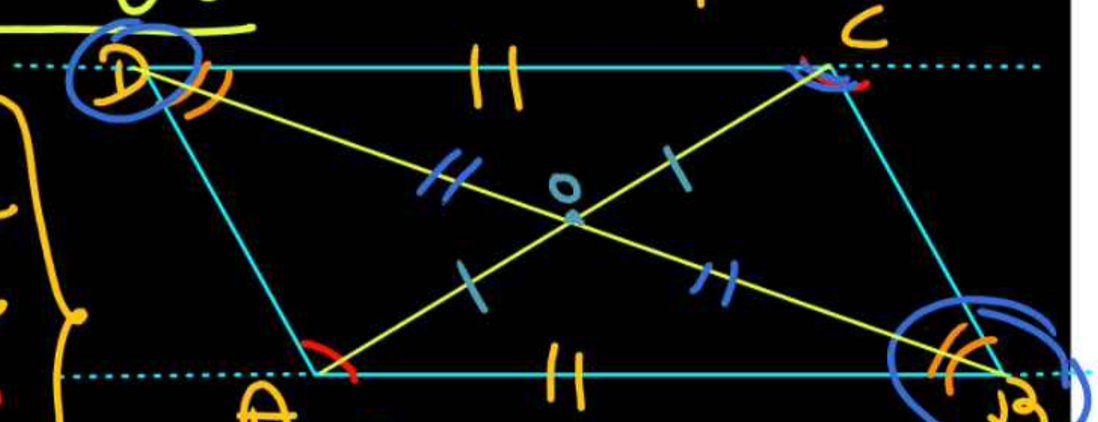
QUADRILATERAL

LIVE STREAMING 06/05/2024 04:00PM



1. Parallelogram समानान्तर चतुर्भुज :-

$AC \neq BD$



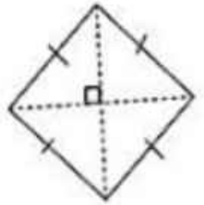
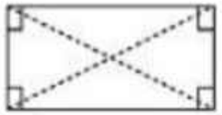
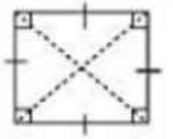
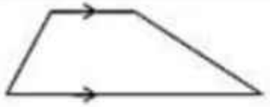
$AB \parallel DC$
$AB = DC$
$AD \parallel BC$
$AD = BC$

$\angle A = \angle C$
$\angle B = \angle D$

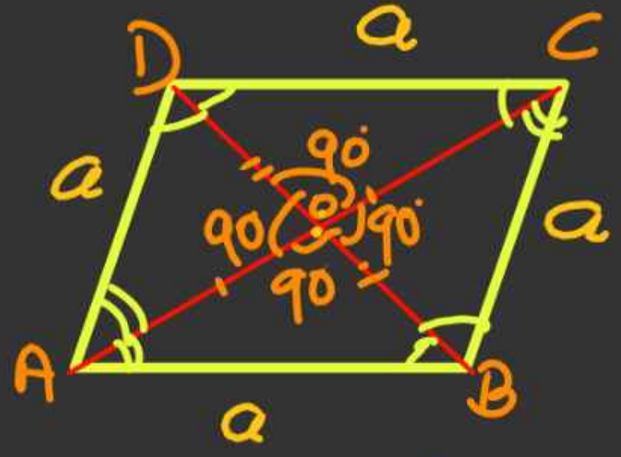
$AO = OC$
$BO = OD$

$\angle A + \angle B = 180^\circ$
$\angle A + \angle D = 180^\circ$
$\angle B + \angle C = 180^\circ$

C. PROPERTIES OF QUADRILATERAL

QUADRILATERAL	PROPERTIES
Parallelogram: A quadrilateral with each pair of opposite sides parallel.	1) Opposite sides are equal 2) Opposite sides are parallel 3) Opposite angles are equal 4) Diagonals bisect to each other
Rhombus: A parallelogram with sides of equal length. 	1) All sides are equal 2) Opposite sides are parallel 3) Diagonals are perpendicular (tegaklurus) to each other 4) Opposite angles are equal 5) Diagonals are the angles bisector 6) Diagonals are line of symetry
 **Rectangle:** A parallelogram with a right angle.	1) All angles are right angle 2) Opposite sides are equal and parallel 3) Diagonals are equal and bisect to each other 4) It has 2 line of symmetry and 2 rotational symmetry
Square: A rectangle with sides of equal length. 	1) All sides are equal 2) All angles are right angle 3) Opposite sides are equal 4) Diagonals are equal and bisect to each other at 90° (perpendicular) 5) Diagonals are bisector angle
Kite: A quadrilateral with exactly two pairs of equal consecutive sides	1) The diagonals are perpendicular to each other 2) One of the diagonals bisects the other 3) One pair of angles are equal 4) 2 pairs of consecutive sides of equal measure. 5) It has two diagonal of different length
 **Trapezium** : Trapezium is a quadrilateral with a pair of parallel sides	1) One pair of parallel sides

Rhombus (समचतुर्भुज):



All the sides are equal.

Diagonal bisect each other (AO=OC, BO=OD)

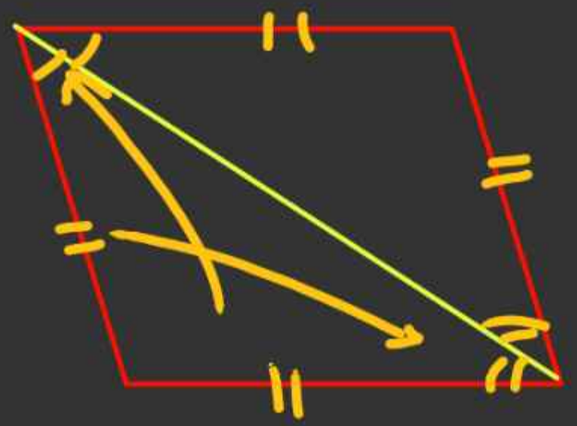
Diagonals are angle bisector.

AC ≠ BD

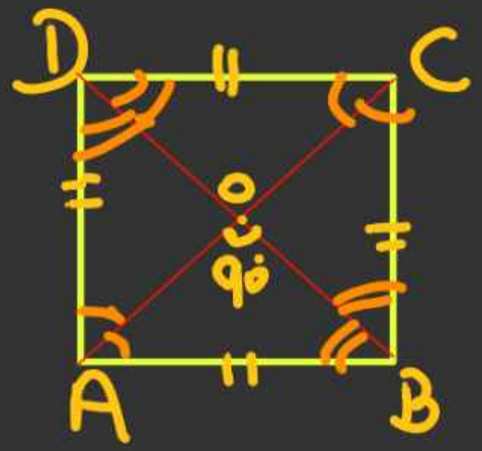
Diagonal bisect at Right angle (90).

∠A = ∠C, ∠B = ∠D

∠A + ∠B = 180, ∠B + ∠C = 180, ∠C + ∠D = 180



वर्ग (square) :→



AB = BC = CD = AD

∠A = ∠B = ∠C = ∠D = 90°

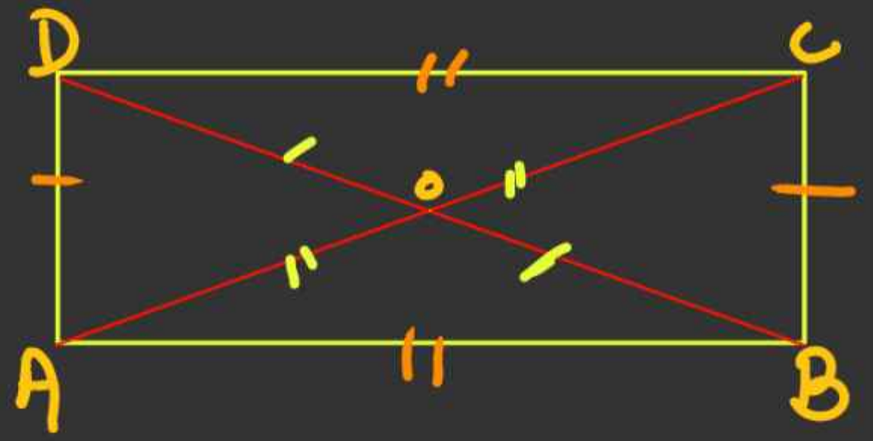
AO = OC = BO = OD

AC = BD

Diagonal are equal & Angle bisector.

Diagonal meets at 90°

आयत (Rectangle):



$AB = CD$
$AB \parallel CD$

$BC = AD$
$BC \parallel AD$

$\angle A = \angle B = \angle C = \angle D = 90^\circ$

$AC = BD$

$AO = OC$, $BO = OD$

TRAPEZIUM →

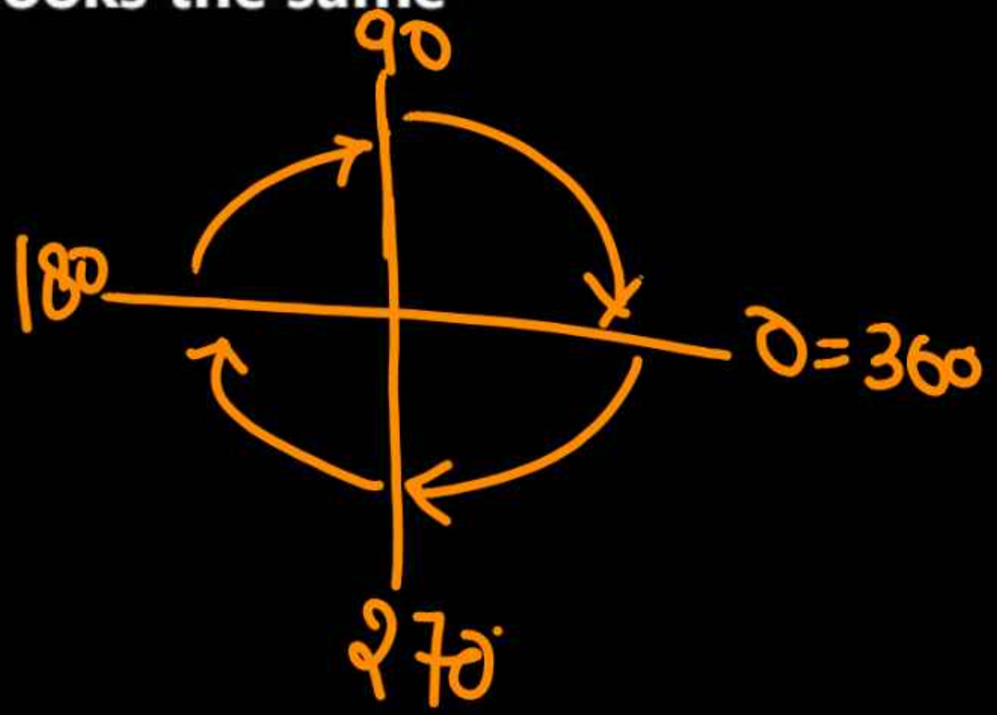
समलम्ब चतुर्भुज

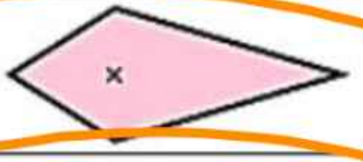
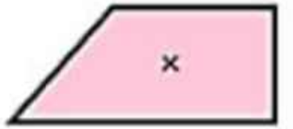
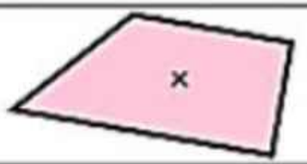
AB || CD

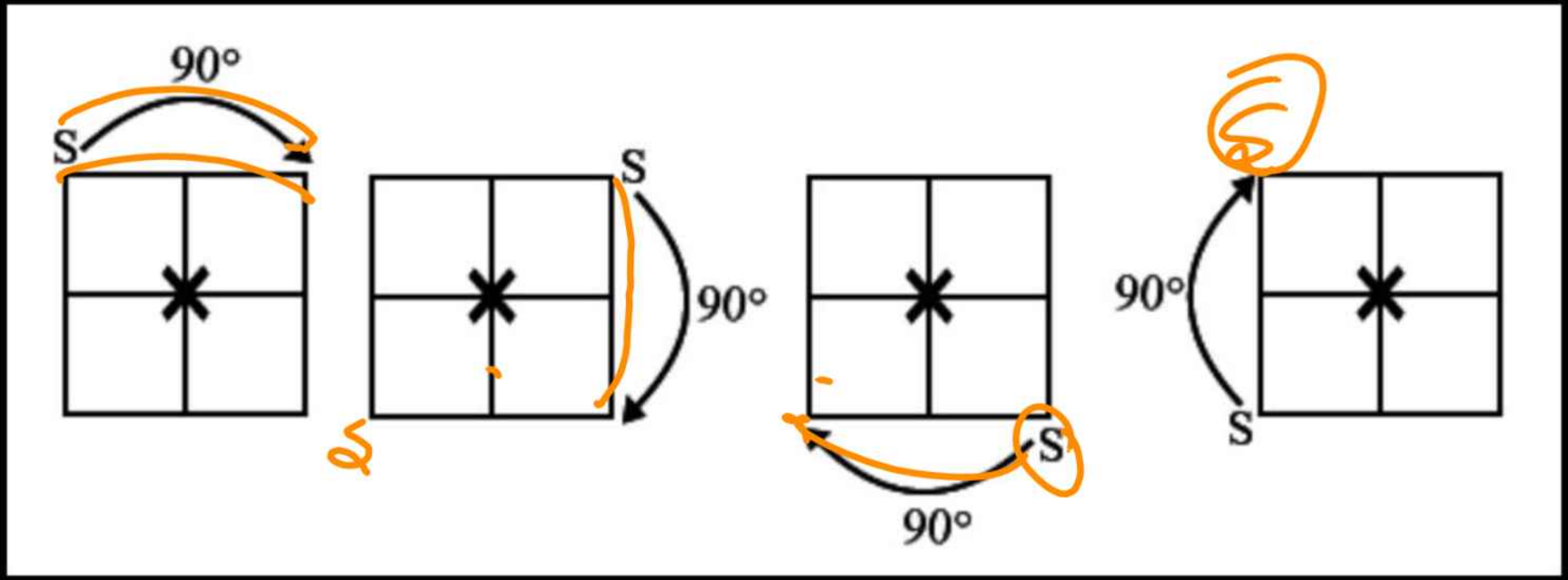
Quadrilaterals

The Rotational Symmetry

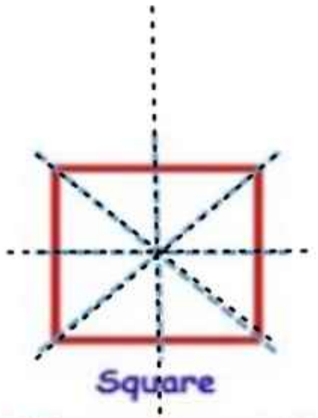
when an object is rotated on its own axis, the shape of the object looks the same



Quadrilateral	Image	Order of Rotational Symmetry
Square		4
Rectangle		2
Parallelogram		2
Rhombus		2
Kite		1
Trapezium		1
Isosceles Trapezium		1
Irregular		1

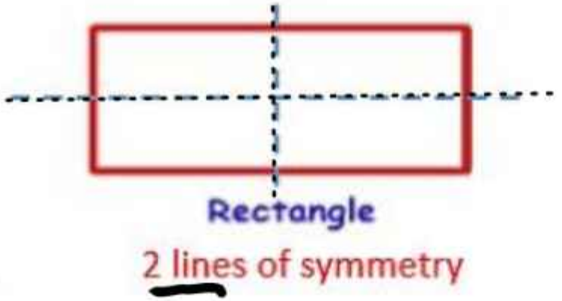

90°
S
S
90°
S
90°
90°
S

Lines of Symmetry



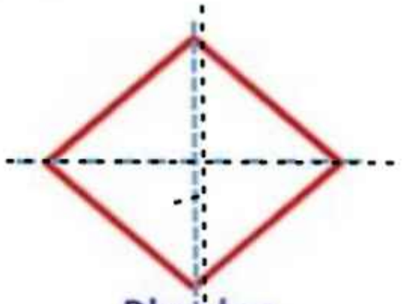
Square

4 lines of symmetry



Rectangle

2 lines of symmetry

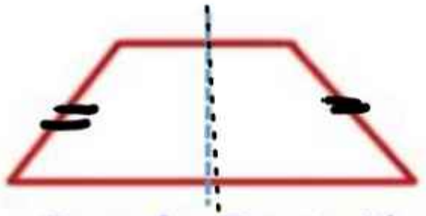


Rhombus

2 lines of symmetry

Kite

1 line of symmetry



Isosceles Trapezoid

1 line of symmetry

Trapezoid

No lines of symmetry

Parallelogram

No lines of symmetry

Equilateral Triangle

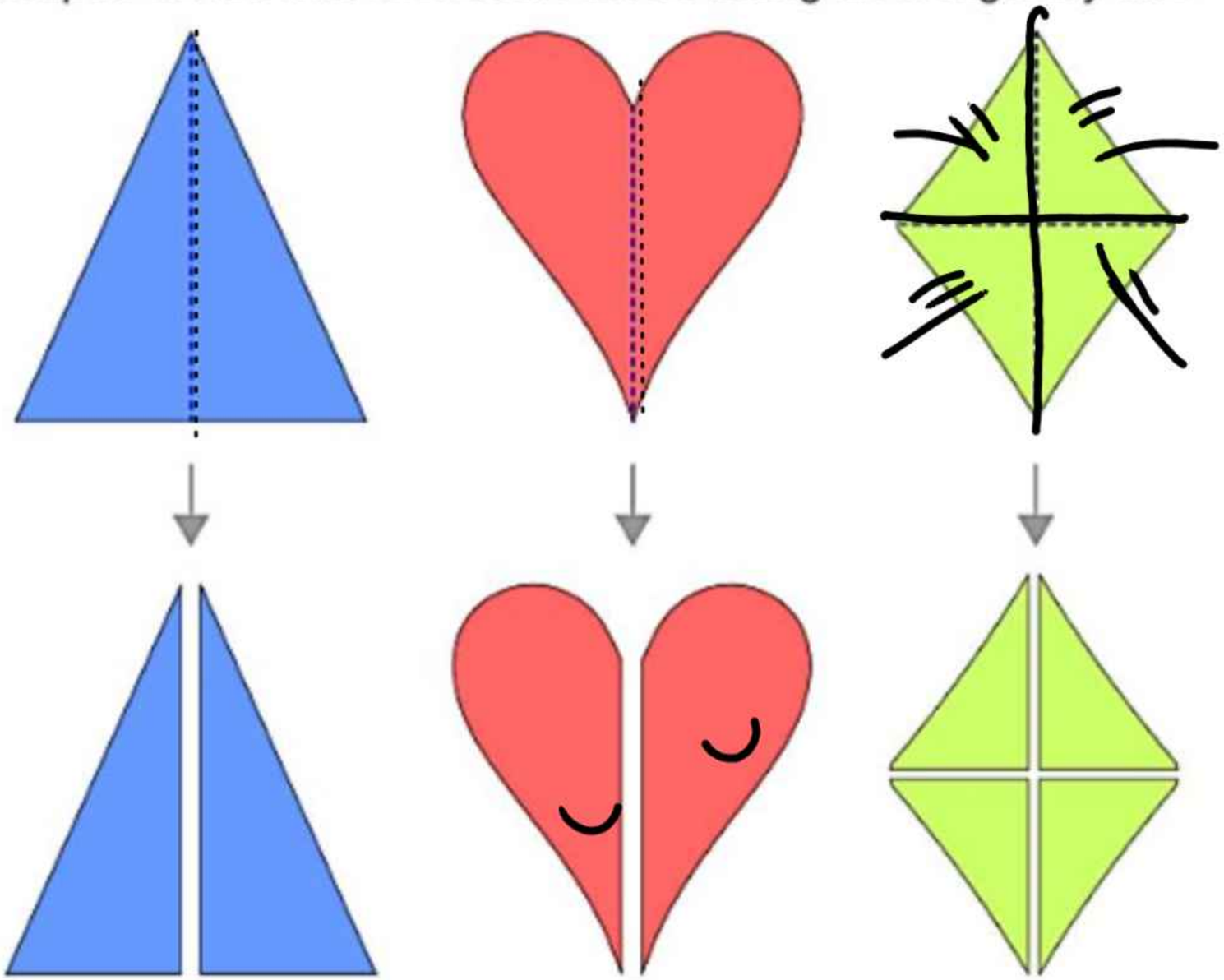
3 lines of symmetry

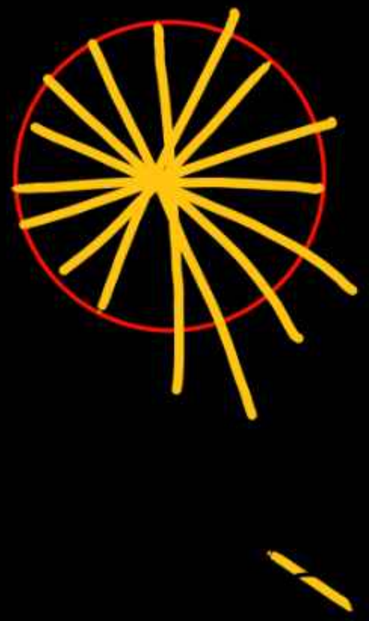
Isosceles Triangle

1 line of symmetry

Symmetry

Shapes divide into identical halves along an imaginary line





Lines of symmetry in Alphabets

A B C D

E F G H

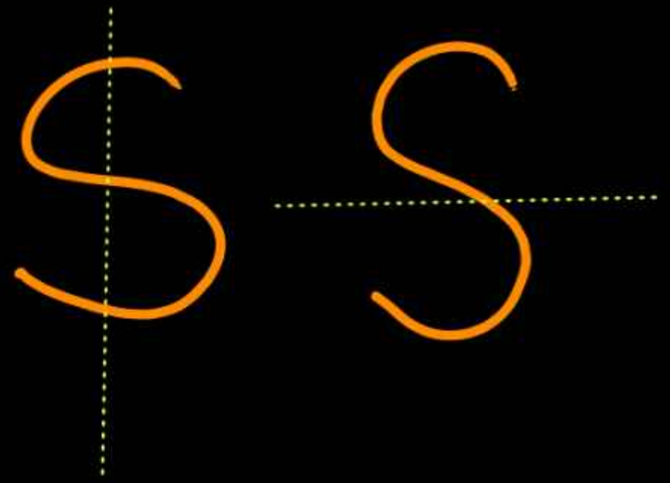
I J K L

M N O

P Q R S

T U V W

X Y Z



4pm-6pm

Quadrilaterals

Line Symmetry / Reflection symmetry : Lines of symmetry are straight lines that divide a shape into two equal parts where one part is an exact reflection of the other (The line of the fold is the line of symmetry)