

# 2D Shapes

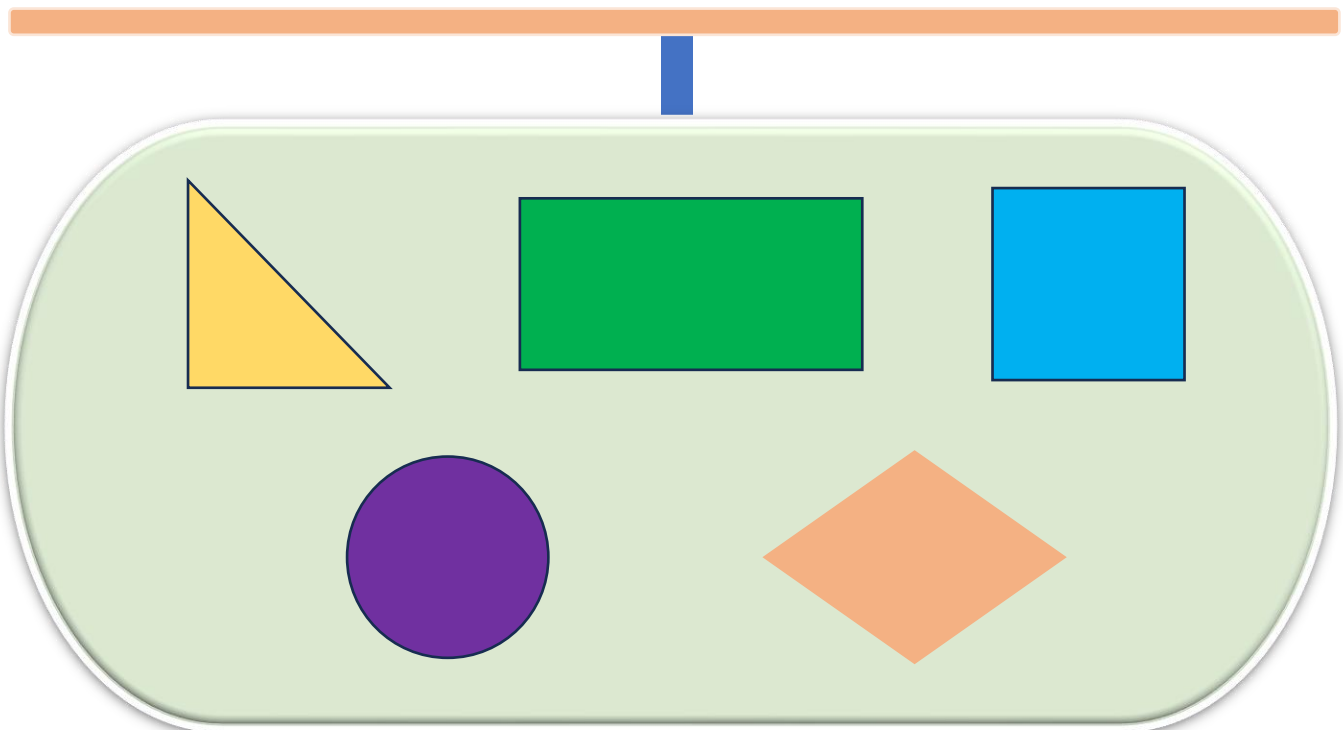
# 2D Shapes

- A two – dimensional (2D) shapes can be defined as a flat figure or a shape that has two dimensions – length and width .
- Two dimensional or 2D shapes do not have any Thickness.

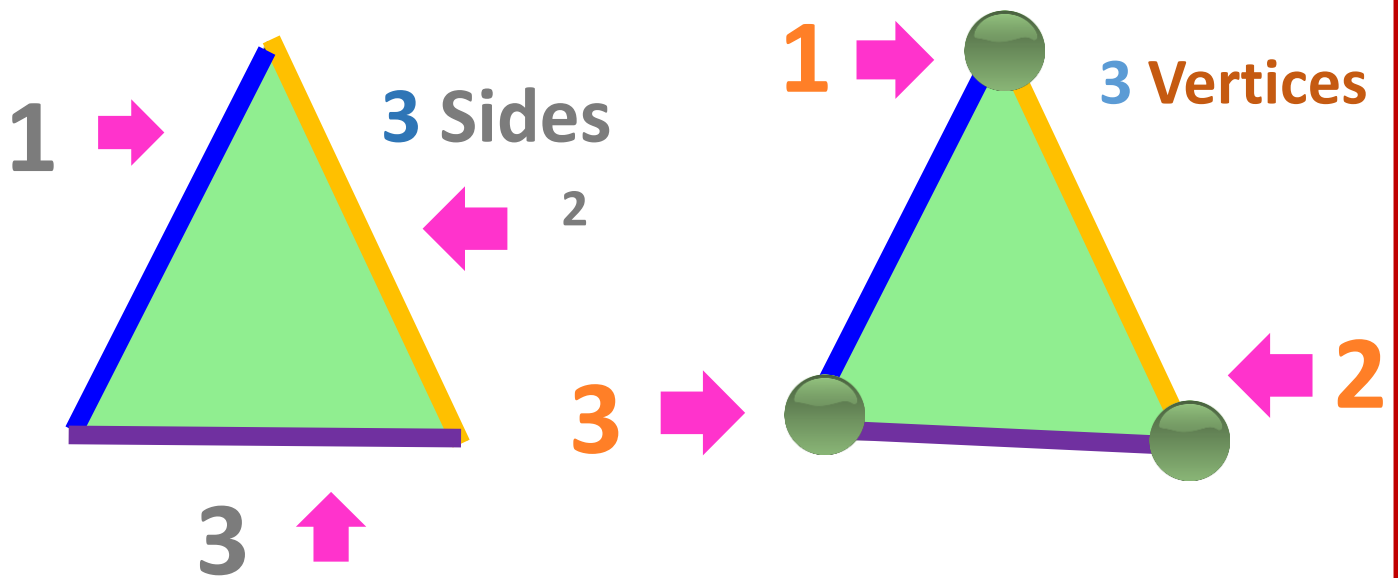
## Examples of 2D Geometric Shapes

A circle ,triangle, square, rectangle ,and pentagon are all examples of two – dimensional Shapes

## Two Dimension Shapes



# Triangle



A **Triangle** has **3 Sides** and **3 Vertices**

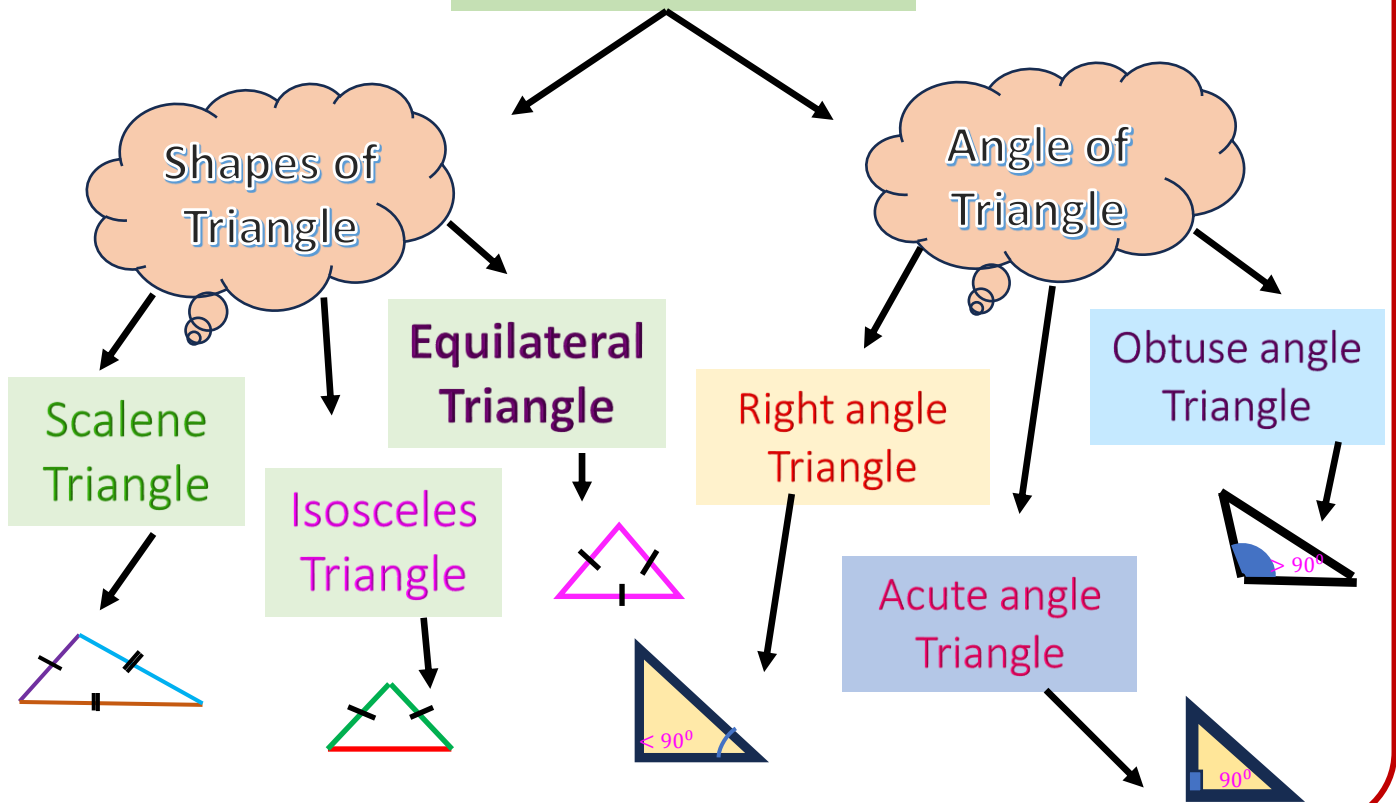
## Definition

- A triangle is a type of polygon, which has three sides, and the two sides are joined end to end is called the vertex of the triangle.
- An angle is formed between two sides.
- This is one of the important parts of geometry.

A triangle has different types based on its angles and sides.

- ❖ Shapes of Triangle
- ❖ Angle of Triangle

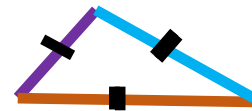
## Types of Triangle



## Shapes of Triangle

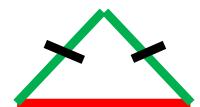
### Scalene Triangle :

A scalene triangle is a type of triangle, in which all the **three sides** have **different side** measures.



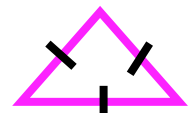
### Isosceles Triangle :

In an isosceles triangle, **two sides** have **equal length**.

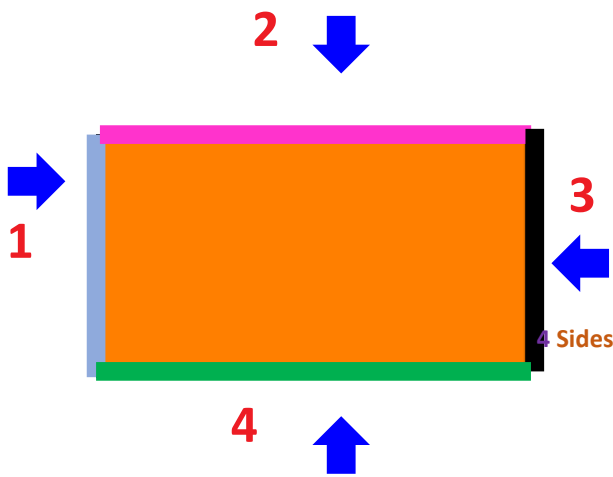


### Equilateral Triangle :

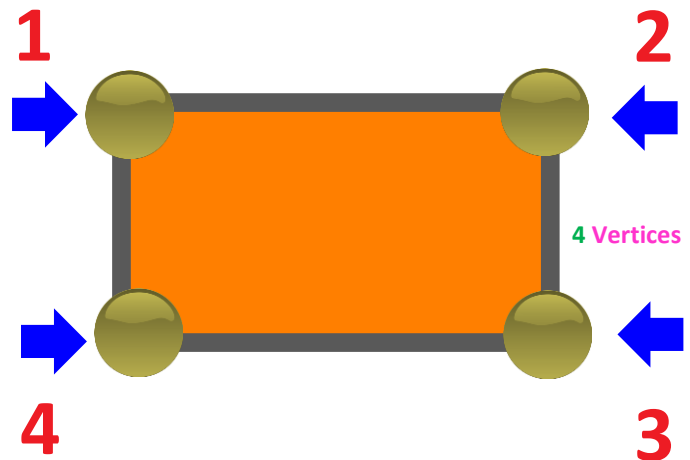
An equilateral triangle has all **three sides equal** to each other.



# Rectangle



The **opposite sides** in a **rectangle** are equal

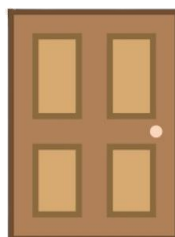


A **Rectangle** has **4 Sides** and **4 Vertices**

## Definition

- A rectangle is a closed 2-D shape, having 4 sides, 4 corners, and 4 right angles ( $90^\circ$ ).
- The opposite sides of a rectangle are equal and parallel.

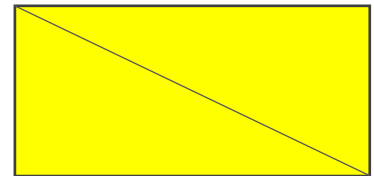
## Examples :



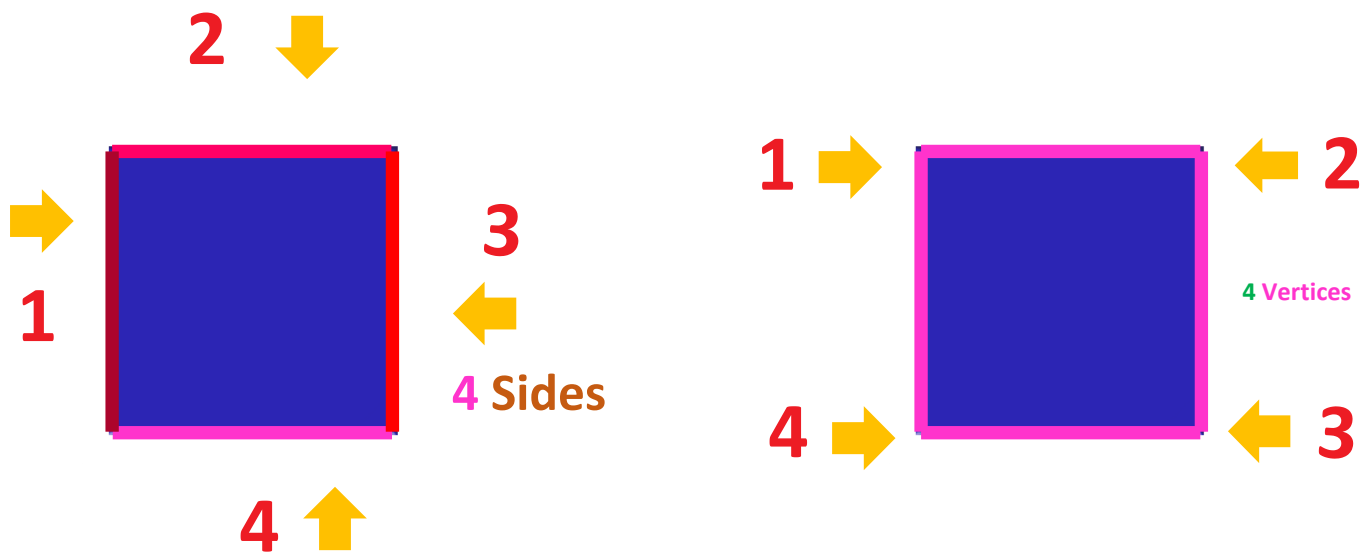
## PROPERTIES OF A RECTANGLE

Rectangle has four sides.

- Two opposite sides are equal.
- Rectangle has four corners.
- Rectangle has two diagonals.
- Two diagonals are equal.



## Square

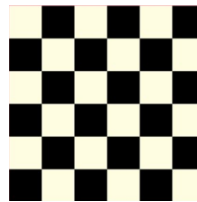
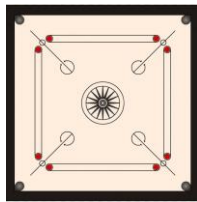


A **Square** has **4 equal Sides** and **4 Vertices**

## Definition

- A square is a two-dimensional closed shape with 4 equal sides and 4 vertices.
- Its opposite sides are parallel to each other.

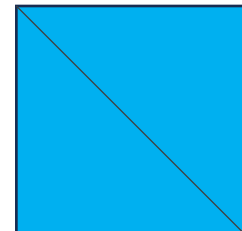
## Examples :



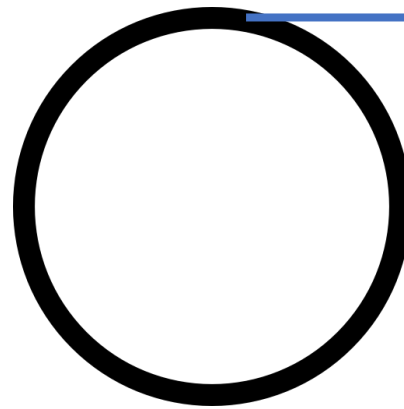
## PROPERTIES OF A SQUARE

### Square has four sides.

- All the four sides are equal.
- Square has four corners.
- Square has two diagonals.
- The two diagonals are equal.



# Circle



Outline of the  
shape

Circle has No Vertices and No sides

## Definition

- A circle is a round-shaped figure that has no corners or edges.
- In geometry, a circle can be defined as a closed shape, two-dimensional shape, curved shape.

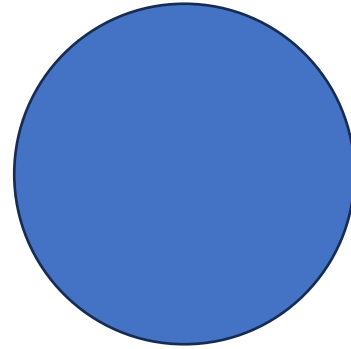
## Examples :





## PROPERTIES OF CIRCLE

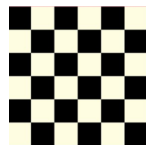
- Circle is a closed curve
- Circle has no sides.
- Circle has no corners.
- Circle has a Centre point.



## Quadrilaterals

A quadrilateral is a polygon having four sides, four angles, and four vertices.







Examples :



## PROPERTIES OF QUADRILATERALS

- ❖ They have four vertices.
- ❖ They have four sides.
- ❖ The sum of all interior angles is  $360^\circ$ .
- ❖ They have two diagonals.

## Types of the Quadrilaterals

Name of the Quadrilaterals	Picture of the Quadrilaterals	Properties of the Quadrilaterals
<b>Parallelogram</b>		Opposite sides are parallel Opposite sides are equal Opposite angles are equal
<b>Square</b>		All sides are equal All angles are equal and measure $90^\circ$
<b>Rectangle</b>		Opposite sides are parallel Opposite sides are equal All angles are equal and measure $90^\circ$
<b>Rhombus</b>		All sides are equal Opposite angles are equal
<b>Trapezoid</b>		Opposite sides are parallel Adjacent angles add up to $180^\circ$
<b>Kite</b>		Adjacent sides are equal One pair of opposite angles are equal