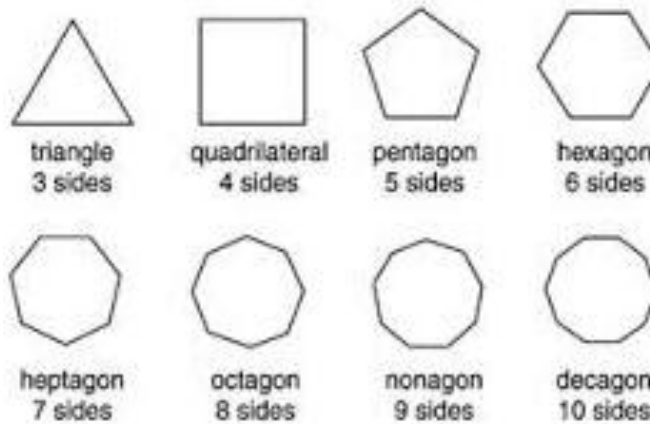


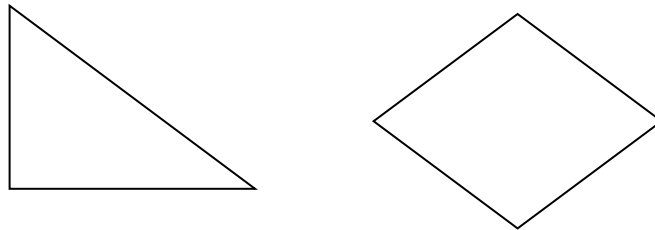
Rectilinear Figures

Polygons

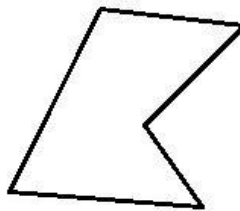
1. A plane figure bounded by straight lines is called a rectilinear figure.
2. A closed figure made up of 3 or more sides is called polygon. Some types of polygons are:



3. If the measure of each interior angle of a polygon is less than 180° , then it is called a convex polygon.



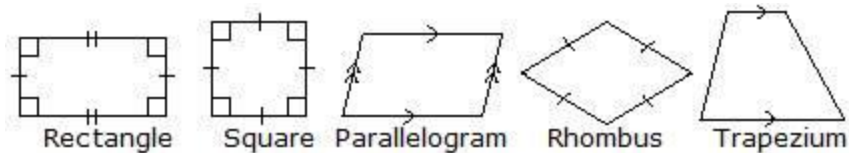
4. If the measure of at least one interior angle of a polygon is more than 180° , then it is a concave polygon.



5. A polygon with all sides and all angles equal is called a regular polygon.
6. Sum of interior angles of a polygon with n sides $= (2n - 4) \times 90^\circ$
7. Each interior angle of a regular polygon with n sides $= \frac{2n - 4}{n} \times 90^\circ$
8. Each exterior angle of a regular polygon $= \frac{360^\circ}{n}$
9. At each vertex of every polygon, Exterior angle + Interior angle $= 180^\circ$

Quadrilaterals

1. A quadrilateral is a four sided polygon.
2. Sum of the angles of a quadrilateral is 360° .
3. Types of quadrilateral are:



Trapezium

A quadrilateral which has exactly one pair of parallel sides is called a trapezium.

An isosceles trapezium is a trapezium in which the two non-parallel sides are equal.

Parallelogram

A quadrilateral in which both the pairs of opposite sides are parallel is called a parallelogram.

A quadrilateral is a parallelogram if

- a. its opposite sides are equal
- b. its opposite angles are equal
- c. its diagonals bisect each other
- d. consecutive angles are supplementary

Rectangle

A parallelogram is called a rectangle if

- a. diagonals are equal
- b. diagonals bisect each other
- c. each angle is a right angle

Rhombus

A parallelogram is called a rhombus if

- a. all the sides are equal
- b. diagonals bisect each other at right angles

Square

A parallelogram is called a square if

- a. all the sides are equal
- b. each angle is a right angle
- c. diagonals are equal
- d. diagonals bisect each other at right angle