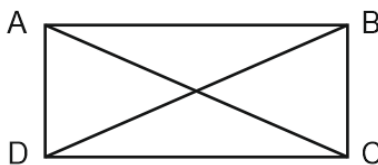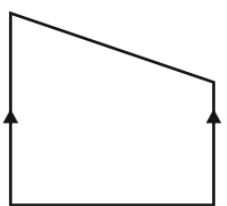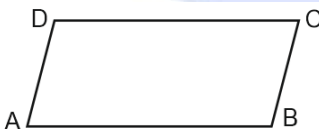- A simple closed curve made up of only line segments is called polygon.
- Classification of polygon.
  - (a) Triangle - a figure having 3 sides and 3 vertices. equilateral, scalene, isosceles
  - (b) Quadrilateral - has 4 sides and 4 vertices.
  - (c) Pentagon - has 5 sides and 5 vertices
  - (d) Hexagon - has 6 sides and 6 vertices
  - (e) Heptagon - has 7 sides and 7 vertices
  - (f) Octagon - has 8 sides and 8 vertices
  - (g) Nonagon - has 9 sides and 9 vertices
  - (h) Decagon - has 10 sides and 10 vertices
- A Diagonal is a line segment which connects two non-consecutive vertices of a polygon.

- Angle sum of a polygon $= (n-2) \times 180^\circ$
- Angle sum property of a triangle.
- The sum of the measures of the three angles of a triangle is 180°.
- Sum of the measures of the external angles of any polygon is 360°.
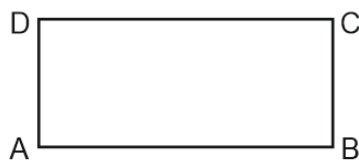- Kinds of Quadrilaterals

  - (a) Trapezium - a quadrilateral with a pair of parallel sides
  - (b) Kite - a quadrilateral which has exactly two distinct consecutive pairs of sides of equal length.
  - (c) Parallelogram - a quadrilateral whose opposite sides are parallel.

    - (i)   The opposite sides of a parallelogram are of equal length.
    - (ii) The opposite angles of a parallelogram are of equal measure.
    - (iii) The adjacent angles in a parallelogram are supplementary
    - (iv) The diagonals of a parallelogram bisect each other.
  - (d) Rhombus - a parallelogram having equal sides

C-9, Greater Kailash Enclave 2, New Delhi; Phone: 9810815644, 9910393669
Email: info.educonclave@gmail.com; sangeettuli@gmail.com

1

(e) Rectangle - A parallelogram with a right angle.

```
D            C
 ┌──────────┐
 │          │
 │          │
 └──────────┘
A            B
```

(f) Square - all four sides are equal

```
D      C
 ┌────┐
 │    │
 └────┘
A      B
```

C-9, Greater Kailash Enclave 2, New Delhi; Phone: 9810815644, 9910393669
Email: info.educonclave@gmail.com; sangeettuli@gmail.com

2