

## LINES AND ANGLES

- If a ray stands on a line then the sum of two adjacent angles so formed is  $180^\circ$ .
- If two lines intersect each other, then the vertically opposite angles are equal.

- If a transversal intersects two parallel lines, then each pair of corresponding angles is equal
- If a transversal intersects two lines such that a pair of corresponding angles is equal, then the lines are parallel to each other

- If a transversal intersects two parallel lines, then each pair of alternate interior angles is equal.
- If a transversal intersects two lines such that a pair of alternate interior angles is equal, then the two lines are parallel.

- If a transversal intersects two parallel lines, then each pair of interior angles on the same side of transversal is supplementary.
- If a transversal intersects two lines such that a pair of interior angles on the same side of transversal is supplementary, then the two lines are parallel.

- Lines which are parallel to the same line are parallel to each other.

- If a side of a triangle is produced, then the exterior angle so formed is equal to sum of two interior opposite angles

- Part of a line with two end points is called a line segment.
- Part of a line with one end point is called a ray

- Three or more points lying on a line are called collinear points.
- An angle is formed when two rays are drawn in different directions from a common initial point.

- Acute angle measures between  $0^\circ$  and  $90^\circ$ .
- Right angle is exactly equal to  $90^\circ$ .
- Obtuse angle measures between  $90^\circ$  and  $180^\circ$ .
- Straight angle is exactly equal to  $180^\circ$ .
- Reflex angle measures between  $180^\circ$  and  $360^\circ$ .
- Complete angle is exactly equal to  $360^\circ$ .

- Two angles whose sum is  $180^\circ$  are called supplementary angles.
- Two angles whose sum is  $90^\circ$  are called complementary angles.
- Interior angles on the same side of transversal are called co-interior angles.
- The sum of angles of a triangle is  $180^\circ$ .

- Two angles are called adjacent angles if they have same vertex, a common arm and are non-overlapping.