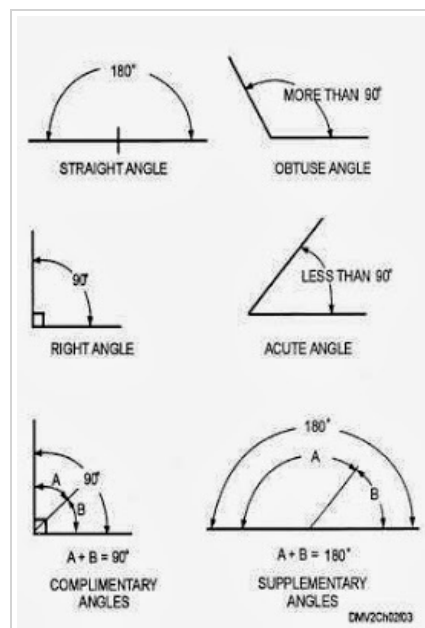


Lines and Angles : Mathematics

Angles

- An angle is formed when two lines or line segments meet.
- Complementary angles are a pair of angles, the sum of whose measure is equal to 90° .
- Supplementary angles are a pair of angles, the sum of whose measure is equal to 180° .
- Adjacent angles have a common vertex, a common arm and non-common arms are on either side of the common arm.
- Adjacent angles have no common interior points.
- A linear pair is a pair of adjacent angles whose non-common sides are opposite rays.
- The angles in a linear pair are supplementary.
- Vertically opposite angles are opposite to each other, and these angles are equal in measure.



Pairs of Lines

- Lines that meet at a point are called intersecting lines.
- Lines that always remain the same distance apart and never meet are called parallel lines.
- A line that intersects two or more lines at a distinct point is called a transversal.
- When two lines are intersected by a transversal, pairs of corresponding angles, alternate angles and interior angles on the same side of the transversal are formed.
- Angles formed on the same side of the transversal, on the same side of the two lines and at corresponding vertices are called corresponding angles.
- When two lines are intersected by a transversal, the pairs of angles on opposite sides of the transversal at the two distinct points of intersection and between the two lines are called alternate interior angles.

- When two lines are intersected by a transversal, the pairs of angles on opposite sides of the transversal at the two distinct points of intersection but outside the two lines are called alternate exterior angles.
- Angles that have different vertices lie on the same side of the transversal and are interior angles are called consecutive interior angles or allied or co-interior angles.
- If two parallel lines are cut by a transversal then each pair of interior angles on the same side of transversal are supplementary, each pair of corresponding angles are equal and each pair of alternate interior angles are equal.
- When a transversal cuts two lines such that pairs of corresponding angles are equal, the lines are parallel.
- When a transversal cuts two lines such that pairs of alternate interior angles are equal, the lines are parallel.
- When a transversal cuts two lines such that pairs of interior angles on the same side of the transversal are supplementary, the lines are parallel.