Angles of Parallelogram

Angles of a Parallelogram:

Definition: A parallelogram is a quadrilateral (a polygon with four sides) in which both pairs of opposite sides are parallel. Parallelograms have several important properties when it comes to their angles.

Properties of Parallelograms:

Opposite Angles are Equal: In a parallelogram, the opposite angles are equal in measure. That means, if you have a parallelogram with angles labeled as A, B, C, and D, then ∠ A is equal in measure to ∠ C, and ∠ B is equal in measure to ∠ D.



ii. Consecutive Angles are Supplementary: Consecutive angles in a parallelogram add up to 180 degrees. This means that if you have angles A and B as consecutive angles, then $\angle A + \angle B = 180$ degrees.

Examples:

- i. If angle A in a parallelogram measures 70 degrees, then angle C also measures 70 degrees.
- ii. If angle B measures 120 degrees, then angle D measures 60 degrees (since 120 + 60 = 180, and they are consecutive angles)

Finding Unknown Angles:

- i. To find an unknown angle in a parallelogram, you can use the properties mentioned above. For example, if you know that one angle in a parallelogram is 50 degrees, you can find its opposite angle by noting that it is also 50 degrees.
- ii. To find consecutive angles, subtract a known angle from 180 degrees