Degree Measure of an Angle

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An angle is formed when two rays meet at a common point.

The point where they meet is called the vertex.

The two rays are called the arms of the angle.

Measuring Angles in Degrees

- The measure of an angle is given in degrees (°).
- A full circle is 360°.
- We use a protractor to measure angles.

Types of Angles Based on Their Degree Measure

Type of Angle	Degree Measure	Example
Acute Angle	Less than 90°	A triangle with a 45° angle
Right Angle	Exactly 90°	The corner of a book or square
Obtuse Angle	More than 90° but less than 180°	A door slightly open at 120°
Straight Angle	Exactly 180°	A straight line
Reflex Angle	More than 180° but less than 360°	The hands of a clock at 10:10 (200°)
Complete Angle	Exactly 360°	A full rotation of a fan blade

Comparison of Angles

- An angle is formed when two rays meet at a common point.
- The point where they meet is called the vertex.
- The two rays are called the arms of the angle.

We compare angles by checking their degree measure. The larger the degree, the bigger the angle.

Methods to Compare Angles

1. By Observation:

If one angle opens wider than another, it is larger.

Example: The door opened slightly (30°) vs. a widely open door (120°).

2. By Measurement:

Use a protractor to measure angles in degrees.

Compare their values.

Example: A 75° angle is smaller than a 100° angle.

3. By Superimposition:

Place one angle over another to see which one is larger.

Example: If two paper angles are cut out, placing one over another helps compare them.

Types of Angles Based on Comparison

Angle Type	Comparison	Example
Smaller Angle	Has a lower degree measure	A 30° angle is smaller than a 60° angle
Larger Angle	Has a higher degree measure	A 150° angle is larger than a 90° angle
Equal Angles	Have the same degree measure	Two right angles (90° each) are equal

Properties of Angle Comparison

i. Angles are compared based on their degree measure (°).

ii. The larger the opening, the greater the angle.

iii. A 90° angle is greater than any acute angle but smaller than any obtuse angle.

iv. A straight angle (180°) is always greater than a right or obtuse angle.

v. A complete angle (360°) is the largest possible angle.