# **Playing With Constructions**

### **Construction in Mathematics**

Construction in mathematics means drawing shapes, angles, and lines accurately using special tools like:

- Ruler (Scale) to measure lengths
- Compass to draw circles or arcs
- Protractor to measure and draw angles
- Pencil & Eraser for neat work

#### **Importance of Construction:**

- Helps in drawing exact shapes
- Useful in geometry
- Needed for real-life designs, maps, and patterns
- Helps understand the properties of shapes

#### **Common Constructions:**

- Drawing a line segment of given length
  Example: Draw a line of 5 cm using a ruler
- Drawing a circle with a given radius
  Use a compass to draw a circle of radius 3 cm
- Constructing a perpendicular bisector
  Divide a line segment exactly into two equal parts
- Drawing angles using protractor
  Example: Draw an angle of 60°
- Constructing angles using compass only
  Example: 60°, 90°, 120° using arcs

#### **Properties of Construction:**

- i. Constructions use mathematical tools for accuracy.
- ii. Angles and shapes must be drawn carefully for correct results.
- iii. A compass helps draw equal-length arcs and circles.
- iv. Ruler and protractor are used for straight lines and measuring angles.
- v. Constructions follow steps precision and order matter.

## Summary:

- Construction = Drawing shapes accurately
- Use ruler, compass, protractor
- Useful for drawing line segments, circles, angles
- Follow steps for neat and exact constructions

**Example:** Draw a circle of radius 4 cm using a compass