More on Constructions

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Construction means drawing geometric shapes accurately using only tools like:

- Ruler (Scale)
- Compass
- Protractor
- Set square
- Pencil

More Can We Construct?

1. Copying a Line Segment

Use compass and ruler

Example: Copy a line segment of 5 cm

2. Copying an Angle

Use compass and straightedge

Example: Copy a 60° angle from one place to another

3. Bisecting a Line Segment

Draw arcs from both ends with compass

Join intersection points to divide the segment into two equal parts

4. Bisecting an Angle

Use compass to divide an angle into two equal angles

Example: Bisect 60° to get two 30° angles

5. Drawing Perpendicular Lines

Draw a line that forms a 90° angle with another line

Can be done using compass or set square

6. Drawing Perpendicular Bisector

Draw arcs from both ends of a line

Connect arc intersections — this line cuts the segment into two equal parts at 90°

Properties of Geometrical Constructions:

- i. Accurate tools are required for perfect construction
- ii. Compass helps draw equal distances and arcs
- iii. Ruler is used to measure straight lines
- iv. Constructions follow logical steps and must be done neatly
- v. Constructions help understand geometry, symmetry, and shape properties

Summary:

- Construction = Drawing shapes using tools
- We can construct line segments, angles, bisectors, perpendiculars
- Use compass, ruler, protractor for accuracy

Example: Bisect an angle or draw a perpendicular line to a segment

• Important in geometry, designs, and real-life applications

