

LESSON PLAN

CLASS X

TOPIC – CONSTRUCTION

Brief description: In this chapter learners will learn to divide the line in the given ratio, construct similar triangles and construct tangents to a point on the circle as well as to the circle from an external point.

OBJECTIVES (Bloom's Taxonomy)

Specific Objectives:

students will be able to:

1. Divide a line in the given ratio. (K)
2. Construct similar triangle with respect to the given ratio. (U)
3. Construct a tangent to a point on the circle. (U)
4. Construct tangents to a circle from external point at a given distance. (A)

Behavioral objectives:

Student will be able to:

- Achieve desired goal by systematic approach.
- Develop their creativity as well as imagination skills
- Learn to do work with accuracy and precision.
- Acquire the skill of drawing figures.

Skills

1. Systematic approach.
2. Creativity.
3. Imagination.
4. Drawing.

ACTIVITIES:

1. To construct a tangent to circle from a point P outside the circle using its centre O.
2. To construction a tangent to a circle from a point out side the circle without using its centre.
3. To construct an isosceles triangle whose base is 8cm and altitude 4cm and then another triangle whose sides are $1\frac{1}{2}$ times the corresponding sides of the isosceles Triangle.

Expected learning outcome:

Students would be able to:

1. Divide a line in the given ratio.
2. Construct similar triangle with respect to the given ratio.
3. Construct a tangent to a point on the circle.
4. Construct tangents to a circle from external point at a given distance.
5. Achieve desired goal by systematic approach.
6. Develop their creativity as well as imagination skills
7. Learn to do work with accuracy and precision.
8. Acquire the skill of drawing figure.

SOLO Taxonomy:

1. **Prestructural** – Constructions using a straight edge (ruler) and a compass, e.g., bisecting an angle, drawing the perpendicular bisector of a line segment, some constructions of triangles
2. **Unistructural** – To divide a line segment in a given ratio.
3. **Multistructural**
 - To construct a triangle similar to a given triangle as per given scale factor.
 - Construction of Tangents to a Circle
4. **Relational** – Concept of construction is also related to the similarity of triangle, as student can also use the construction in proving any similarity criteria.
5. **Extended Abstract** –
 - (i) Students can use this concept for making blue prints and also it is helpful in architecture.
 - (ii) It is also useful in some streams of physics.