

Class – XI

Lesson Plan

TOPIC: STRAIGHT LINE

Brief Description: In this chapter, we will teach students about equation of straight lines in one-point slope form, two-point form, intercept form and normal form of equation of line. They will also study distance of line from a point and condition of perpendicularity and parallelism.

UN Sustainable Goals to be achieved (if any): Quality Education

Objectives: (put Bloom's level)

I - Specific Objectives

Students will be able to understand:

- ❖ Slope of a Line
- ❖ Conditions for parallelism and perpendicularity of lines in terms of their slopes
- ❖ Various forms of the equation of a line
- ❖ Angle between two lines
- ❖ General equation of a line
- ❖ Distance of a point from a line
- ❖ Distance between two parallel lines.

II - Behavioral Objectives

After learning this chapter students will be able to develop

1. Presentation skill
2. Visualization skill
3. Give responses according to situation

Process / Activities:

Activity (to introduce the lesson)

For introducing the chapter (Straight Lines), students will be asked to:

1. Generation of equation by two-point form

Activity (to support learning)

Students will be asked to conduct an activity in the classroom regarding:

To convert standard equation of line $ax + by + c = 0$, in other forms

Skills (as per subject)

- ❖ Visualization
- ❖ Observation
- ❖ Understanding
- ❖ Problem solving

Exercise for Notebook (put Bloom's level)

- ❖ Glossary
- ❖ R.T.C (Reference to Context)
- ❖ Typology of questions
- ❖ Value based question

Digital Content to be used:

Video will be shown to students for better visualization of concept

Expected Learning Outcomes

Students would be able to learn:

- ❖ Slope of a Line
- ❖ Conditions for parallelism and perpendicularity of lines in terms of their slopes
- ❖ Forms of the equation of a line
- ❖ Angle between two lines
- ❖ General equation of a line
- ❖ Distance of a point from a line
- ❖ Distance between two parallel lines.
- ❖ Presentation skill
- ❖ Visualization
- ❖ Give responses according to situation

Assessment: (put Bloom's level)

Q1. Write the equations for the x -and y -axes. (PS)

Q2. Write the equation of line passing through $(0, 0)$ with slope m . (US)

Q3. The vertices of triangle PQR are P $(2, 1)$, Q $(-2, 3)$ and R $(4, 5)$.

Find equation of the median through the vertex R. (MS)

Q4. The length L (in centimeter) of a copper rod is a linear function of its Celsius temperature C . In an experiment, if $L = 124.942$ when $C = 20$ and $L = 125.134$ when $C = 110$, express L in terms of C . (R)

Q5. The owner of a milk store finds that, he can sell 980 litres of milk each week at Rs 14/litre and 1220 litres of milk each week at Rs 16/litre. Assuming a linear relationship between selling price and demand, how many litres could he sell weekly at Rs 17/litre? (AEL)