FAQs

1. What does computation of area mean? And why is it important?

One of the primary objects of land surveying is to determine the area of the land surveyed. Areas may be determined by:

computation from field notes: It can be done by two ways.

a) Calculation of the area of the skeleton of the survey and

b) Calculation of the area enclosed between survey lines of skeleton and boundaries.

2. What is graphical and instrumental method?

The area may be calculated in the following two ways:

Case 1 – Graphical method

Case 2 - Instrumental Method

GRAPHICAL METHOD

The graphical methods are those in which the required data obtained from measurements of plan. In this case the area of figure is found as a whole, or the areas of the skeleton and the irregular strips are found separately.

INSTRUMENTAL METHOD

- This method consists of determining the area of a given map with the uses of a planimeter.
- It is the best and most expeditious method and gives accurate results than other methods.

3. What are the five rules/methods used in computing area in surveying?

Here are the five important rules (Methods) used for the calculation of areas in Surveying:

- Midpoint ordinate rule
- Average ordinate rule
- Simpson's rule
- Trapezoidal rule
- Graphical rule

4. Briefly explain any one method to calculate area for a irregular shaped plot

METHOD I

- Determination of a very irregularly shaped area can be obtained by establishing the longest line possible lengthwise through the center of the area.
- Numerous lines are then established perpendicular to this center line. The total number of lines will depend upon how irregular the shape of the area may be.
- The more irregular it is, the more lines should be drawn. From the average length of all these lines, the width of the area is determined and the area calculated as a rectangle.

5. How is area calculated for a site when it is a summation of geometrical shapes?

BY DIVISION INTO TRIANGLES:

- The most convenient method is to divide the figure in to a number of triangles. The base and altitude of each triangle are scaled and its area is found.

BY DIVISION INTO SQUARE

- In this method a piece of tracing paper ruled out into squares, each responding a definite number of square meter or square centimeter is placed over the drawing. The number of whole square is measure and area is found. The portions of broken square are estimated in terms of Whole Square and broken squares.