

- Generalises properties of numbers and relations among them studied earlier to evolve results, such as, Euclid's division algorithm, fundamental theorem of arithmetic, and applies them to solve problems related to real life contexts.
- Develop a relationship between algebraic and graphical methods of finding the zeroes of a polynomial
- Finds solutions of pairs of linear equations in two variables using graphical and different algebraic methods.
- Demonstrates strategies of finding roots and determining the nature of roots of a quadratic equation.
- Develops strategies to apply the concept of AP to daily life situations.
- Works out ways to differentiate between congruent and similar figures.
- Establishes properties for similarity of two triangles logically using different geometric criteria established earlier such as basic proportionality theorem etc.
- Derives formulae to establish relations for geometrical shapes in the context of a coordinate plane, such as finding the distance between two given points, to determine coordinates of a point between any two given points, to find area of a triangle etc.
- Determines all trigonometric ratios with respect to a given acute angle (of a right triangle) and uses them in solving problems in daily life contexts like finding heights of different structures or distances from them.
- Constructs
  - A) A triangle similar to a given triangle as per a given scale factor.
  - B) A pair of tangents from an external point to a circle and justify procedures.
- Examines the steps of geometrical constructions and reason out each step
- Finds surface areas and volumes of objects in the surroundings by visualising them as a combination of different solids like cylinder and a cone, cylinder and a hemisphere, combination of different cubes etc.
- Calculates mean, median and mode for different sets of data related with real life contexts.
- Determines the probability of an event.

**CLASS : X**

**SUBJECT : MATHS**