

SAINIK SCHOOL GOPALGANJ
CLASS – X
SUB: MATHEMATICS

Complete any three of the following activities:

1. Find the HCF of two numbers experimentally based on Euclid Division Lemma.
2. Draw the graph of a quadratic polynomial and observe:
 - (i) The shape of the curve when the coefficient of x^2 is positive.
 - (ii) The shape of the curve when the coefficient of x^2 is negative.
 - (iii) Its number of zeroes.
3. Verify the conditions of consistency/inconsistency for a pair of linear equations in two variables by graphical method.
4. To obtain the solution of a quadratic equation ($x^2 + 4x = 60$) by completing the square geometrically.
5. Identify Arithmetic Progressions in some given lists of numbers (patterns).
6. Verify the distance formula by graphical method.
7. Verify section formula by graphical Method.
8. Verify the formula for the area of a triangle by graphical method
9. Establish the criteria for similarity of two triangles.
10. Find the relationship between areas and sides of similar triangles.
11. Verify experimentally that the ratio of the areas of two similar triangles is equal to the ratio of the squares of their corresponding sides.
12. Find the number of tangents from a point to a circle.
13. Verify that the lengths of tangents to a circle from some external point are equal.