

PROGRAMME N° 5.

ALGEBRA.

I.

1. The multiplication or division of an inequation by a positive quantity results in an inequation in the same sense.
2. Application of this theorem.
3. Interpretation of negative quantities in problems.
4. Negative quantities may indicate the measures and places of magnitudes.
5. Cases of impossibility.

II.

6. Quadratic equations; pure quadratics; affected quadratics.
7. Form in which the equation $ax^2 + bx + c = 0$, may be expressed.
8. Formula employed in solving the equation $x^2 + px + q = 0$.
9. Rule drawn from the preceding formula for the solution of quadratic equations.

III.

10. Arithmetical progression; — increasing and decreasing ratio.
11. To find a general expression for any term of an arithmetical progression.
12. To find a general expression for the sum of all the terms of an arithmetical progression.

IV.

13. Geometrical progression; — increasing and decreasing ratio.
14. To find an expression for the n th term of a geometrical progression.
15. To find an expression for the sum of all the terms of a geometrical progression.
16. To find an expression for the sum of the terms of a decreasing geometrical progression when the number of terms is infinite.

V.

17. Summation of series.
18. To find the scale of relation in a recurring series of the first order.
19. To find the sum of an infinite recurring series of the second order.