Pre-course of Mathematics

Dates: 1 - 12 September 2024
Room: Aula Acquario, ground floor of the Faculty of Economics
The lessons can be followed remotely via: https://uniroma1.zoom.us/j/89659566723

Program:

1 Sept. 2PM-4PM	FUNDAMENTALS (PART I) Real numbers: operations and properties. Sets and intervals. Absolute value and distance. Exponents and radicals.
2 Sept. 2PM-4PM	FUNDAMENTALS (PART II) Algebraic expressions: monomial and polynomial, operations, factorization, special formulas. Rational expressions: operations, least common denominator of polynomials, rationalizing the denominator.
3 Sept. 2PM-5PM	EQUATIONS AND INEQUALITIES (PART I) Linear equations. Quadratic equations: discriminant, quadratic formula. Equations with higher powers, radicals, absolute values.
4 Sept. 2PM-4PM	EQUATIONS AND INEQUALITIES (PART II) Linear inequalities. Quadratic inequalities.
5 Sept. 2PM-4PM	EQUATIONS AND INEQUALITIES (PART III) Inequalities involving quotients, absolute values. System of inequalities.
8 Sept. 2PM-5PM	EXPONENTIAL AND LOGARITHMIC FUNCTIONS (PART I) Definition of exponential function. Exponential equations and inequalities. Definition and properties of logarithms.
9 Sept. 2PM-4PM	EXPONENTIAL AND LOGARITHMIC FUNCTIONS (PART II) Equations and inequalities involving exponential and logarithmic functions.
10 Sept. 2PM-4PM	ANALYTIC GEOMETRY Cartesian coordinates in the plane, distance between two points, equation of a line, parallel and perpendicular lines, distance from a point to a line, parabola, line-parabola intersections and conditions for tangency.
12 Sept.	Final Online Asynchronous Pre-Course Test The purpose of the test is to evaluate the learning outcomes of the pre-course. It is asynchronous, repeatable, and not graded, and is intended as a practice tool. The link to the Moodle quiz will be published later on this page.

All relevant material will be uploaded to Google Classroom.
Classroom link: https://classroom.google.com/c/MjE2Mjk1MjMxMjda?cjc=m7gyzqlq

Reference Book: Precalculus: Mathematics for Calculus. Authors: James Stewart, Lothar Redlin, Saleem Watson.