Mathematics Crash Course a.y. 2023/2024 – program

Prof. Filippo Petroni

- Functions and Their Graphs
- Some Important Functions
- The Algebra of Functions
- The Slope of a Straight Line
- The Derivative and Limits
- Differentiability and Continuity
- Some Rules for Differentiation
- Describing Graphs of Functions
- The First- and Second-Derivative Rules
- The First- and Second-Derivative Tests and Curve Sketching
- The Definite and Indefinite Integral
- Examples of Functions of Several Variables
- Partial Derivatives
- Maxima and Minima of Functions of Several Variables
- Lagrange Multipliers and Constrained Optimization