

0.6.42.1 Mathematics' "II"

Infinite series, Sum of an infinite series, Geometric series, Arithmetic series, Harmonic series test for divergence, nth term test for divergence, Convergence of p – series, The ratio test, the root test, Alternating series test, Absolute and conditional convergence, Ratio test for absolute convergence, Power series in X, Power series in X-C, Radius and interval of convergence for power series, Taylor and maclaurin series, Taylor formula with remainder, Constructing maclaurin series by substitution, Computation using Taylor series, Differentiation and integration of power series, Polar coordinates, Relationship between polar and rectangular coordinates, Graphs in polar coordinates, Standard polar curves and equations, Area in polar coordinates, Vectors , Vectors representation, Addition, subtraction, length of a vector, Zero vector, Unit vector, Direction of a non zero vector, Dot product, Projections, Orthogonal vectors, Orthogonal projections of vectors, Cross product, Triple scalar product, Vector equation of lines, line segments and planes, Partial derivatives, Partial derivatives of function of two variables, Partial derivatives of function of more than two variables, Chain rule, Multiple integrals, Double integrals in rectangular coordinates, Triple integrals in rectangular coordinates, Vector functions.

0.6.42.2 Strength of Materials