mathcentre
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OVER 1000 SEPARATE RESOURCES AVAILABLE NOW!

Arithmetic
- Rules of Arithmetic
- Decimals, Fractions, Percentages, Ratio, Roots

Algebra
- Mathematical language
- Algebraic manipulation
- Formulae, equations and inequalities

Functions and Graphs
- Exponential, logarithmic, hyperbolic, polynomial and trigonometric functions
- Inverse functions

Trigonometry
- Pythagoras’ theorem
- Radians
- Trigonometric equations, formulae, ratios, identities and functions

Geometry
- Properties of straight line segments
- Conic sections (ellipse, hyperbola, parabola)
- Polar co-ordinates

Sequences & Series
- Arithmetic & geometric sequences and series
- Sigma notation

Vectors
- Cartesian components of vectors
- Scalar and vector products

Differentiation
- from first principles
- by taking logs, parametric, implicit
- Chain, product and quotient rules
- Maxima & minima

Integration
- as the reverse of differentiation, as a summation
- by parts, by substitution, using partial fractions, using trig identities

Matrices
- Matrix arithmetic
- Inverses and determinants
- Eigenvalues, eigenvectors

Complex Numbers
- Complex arithmetic
- Argand diagram and polar form
- De Moivre’s theorem
- Roots of polynomials and the exponential form

Differential Equations
- First and second order differential equations

Proofs
- Direct proof
- Proof by induction

Mechanics
- Forces, impact, momentum, Newton’s laws of motion

Resources continually being added …..

For statistics resources see www.statstutor.ac.uk