

MAT - Useful material outside syllabus (2 pages; 6/10/24)

Potentially useful topics that are outside the official syllabus, or are not specifically mentioned . [References are to fmng.uk; see also MAT: “Important Ideas”]

Factorisation of quadratics (where coefficient of x^2 isn't 1) [MAT: “Important Ideas”]

Factorisations of $x^n \pm y^n$ [MAT: “Important Ideas”]

Remainder theorem

Properties of cubics [Pure/Polynomials: “Cubics - Important Ideas”]

Trinomial expansions [MAT: “Important Ideas”]

Inequalities [Pure: “Inequalities – Important Ideas”]

Points of inflexion [Pure/Differentiation: “Turning Points & Points of Inflexion - Important Ideas”]

Product, Quotient & Chain rules for differentiation

Bounds for logarithms [MAT: “Important Ideas”]

Reflection in the lines $x = a$ & $y = b$ [Pure/Functions: “Transformations – Important Ideas”]

Solution of $\sin(a\theta + b) = c$ [MAT: “Important Ideas”]

Compound angle formulae (and $R\sin(\theta + \alpha)$ form) [Pure/Trigonometry: “Compound Angle Formulae”]

Key trig. results, such as $\cos(180^\circ - \theta) = -\cos\theta$ [MAT: “Important Ideas”]

Linear interpolation [Pure: “Linear interpolation”]

Tests for divisibility [MAT: “Important Ideas”]

Equating coefficients [MAT: “Important Ideas”]

Counting [MAT: “Important Ideas”]

Relations between polynomial coefficients and roots [Pure: Roots of Polynomials]