

MAT Problems - Polynomials (1 page; 19/9/17)

[Note: These are all included in the STEP Problems]

(1) Factorise $2x^3 - 33x^2 - 6x + 11$

(2) What is the minimum value of $(x^2 - 4x + 3)(x^2 + 4x + 3)$, where x can be any real number? (without using Calculus)

(3) (i) Factorise (a) $x^3 - y^3$ (b) $x^3 + y^3$

(ii) Can $3^{54} - 2^{54}$ be prime?