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A LEVEL MATHS

(3) Factorising Expressions

WORKING AT D/E

(1) Factorise $12x^2 + 19x + 4$ into double brackets.

(2) Factorise $121x^2 - 36$ by considering the difference of two squares.

(3) Show that $9x^2 + 6x + 1$ and be written in the form $(Ax + B)^2$

WORKING AT B/C

(1) Factorise $-4x^2 + 5x + 6$

(2) Fully factorise $20x^3 - 7x^2 - 3x$

(3) Show that $64x^4 - 25y^2$ can be written in the form $(Ax^n + By)(Ax^n - By)$ where A, B and n are integers to be found.

WORKING AT A*/A

(1) Fully Factorise $(3x + 1)^{31} - (3x + 1)^{30}$

(2) Fully factorise $169x - x^3y^2$

(3) Using the trigonometric identity (which you may know or will learn soon!)

$\sin^2 x + \cos^2 x \equiv 1$

show that $\cos^4 x - \sin^4 x \equiv \cos^2 x - \sin^2 x$