Further Algebra – 2022 GCE AS Pure Further Mathematics A

1. June/2022/Paper_Y531/01/No.3

In this question you must show detailed reasoning.

The roots of the equation $5x^3 - 3x^2 - 2x + 9 = 0$ are α, β and γ.

Find a cubic equation with integer coefficients whose roots are $\alpha\beta$, $\beta\gamma$ and $\gamma\alpha$. [6]