Introduction to Coding Theory Assignment 18

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1 Q1

(a) The roots are $(x^2 + x + 1)$ and $(x^3 + x^2 + 1)$ in GF (2^6)

(b) The roots are $(x + 1)$ and $(x^3 + x + 1)$ in GF (2^3)

(c) The roots are $x^3 + x^2 + 1)$ and $(x^3 + x + 1)$ in GF (2^3)

2 Q2

(a) The root is α^3 in GF (2^3)

(b) The roots are α^3 and α^6 in GF (2^3)

(c) No roots exist