

1. The roots of the equation

$$2x^3 - 3x^2 + 4x + 7 = 0$$

are α , β and γ

Without solving the equation, determine the value of

(i) $\frac{3}{\alpha} + \frac{3}{\beta} + \frac{3}{\gamma}$

(ii) $(\alpha - 2)(\beta - 2)(\gamma - 2)$

(iii) $\alpha^2 + \beta^2 + \gamma^2$