Q. No.	DAY - 14
76	## EXERCISE 3.1 1. If the sides of a cubic box are increased by 1, 2, 3 units respectively to form a cuboid, then the volume is increased by 52 cubic units. Find the volume of the cuboid.
77	3. If α, β and γ are the roots of the cubic equation $x^3 + 2x^2 + 3x + 4 = 0$, form a cubic equation whose roots are (i) 2α, 2β, 2γ (ii) $\dfrac{1}{\alpha}, \dfrac{1}{\beta}, \dfrac{1}{\gamma}$ (iii) $-\alpha, -\beta, -\gamma$
78	4. Solve the equation $3x^3 - 16x^2 + 23x - 6 = 0$ if the product of two roots is 1.
79	6. Solve the equation $x^3 - 9x^2 + 14x + 24 = 0$ if it is given that two of its roots are in the ratio $3:2$.
80	7. If α, β, and γ are the roots of the polynomial equation $ax^3 + bx^2 + cx + d = 0$, find the value of $\sum \dfrac{\alpha}{\beta\gamma}$ in terms of the coefficients.

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8. If α, β, γ, and δ are the roots of the polynomial equation

$2x^4 + 5x^3 - 7x^2 + 8 = 0$, find a quadratic equation with integer

coefficients whose roots are $\alpha + \beta + \gamma + \delta$ and $\alpha\beta\gamma\delta$.