

① $2x^2 - 7x + 3 = 0$

(x2) $4x^2 - 14x + 6 = 0$

$\Rightarrow (2x)^2 - 2 \times 2x \times \frac{7}{2} + \left(\frac{7}{2}\right)^2 - \left(\frac{7}{2}\right)^2 + 6 = 0$

$\Rightarrow (2x - \frac{7}{2})^2 + 6 - \frac{49}{4} = 0$

$\Rightarrow (2x - \frac{7}{2})^2 + \frac{24 - 49}{4} = 0$

$\Rightarrow (2x - \frac{7}{2})^2 - \frac{25}{4} = 0$

$\Rightarrow (2x - \frac{7}{2})^2 - (\frac{5}{2})^2 = 0$

$\Rightarrow (2x - \frac{7}{2} - \frac{5}{2})(2x - \frac{7}{2} + \frac{5}{2}) = 0$

$\Rightarrow 2x - \frac{7}{2} - \frac{5}{2} = 0, 2x - \frac{7}{2} + \frac{5}{2} = 0$

$\Rightarrow 2x = \frac{12}{2}, 2x = \frac{2}{2}$

$\Rightarrow x = \frac{6}{2}, x = \frac{2}{4}$

$\Rightarrow x = 3, x = \frac{1}{2}$

$\therefore x = \frac{1}{2}, 3$ \therefore roots are $\frac{1}{2}, 3$

$$\left[\begin{array}{l} 2ab = +14x \\ 2 \times 2x \times b = +14x \\ b = \frac{+14x}{4x} \\ b = \frac{7}{2} \end{array} \right]$$

⑩ $2x^2 + x - 4 = 0$

(x2) $4x^2 + 2x - 8 = 0$

$\Rightarrow (2x)^2 + 2 \times 2x \times \frac{1}{2} + \left(\frac{1}{2}\right)^2 - \left(\frac{1}{2}\right)^2 - 8 = 0$

$\Rightarrow (2x + \frac{1}{2})^2 - \frac{1}{4} - \frac{8}{1} = 0$

$\Rightarrow (2x + \frac{1}{2})^2 - \frac{33}{4} = 0$

$\Rightarrow (2x + \frac{1}{2})^2 - \left(\frac{\sqrt{33}}{2}\right)^2 = 0$

$\Rightarrow (2x + \frac{1}{2} - \frac{\sqrt{33}}{2})(2x + \frac{1}{2} + \frac{\sqrt{33}}{2}) = 0$

$\Rightarrow 2x + \frac{1}{2} - \frac{\sqrt{33}}{2} = 0, 2x + \frac{1}{2} + \frac{\sqrt{33}}{2} = 0$

$\Rightarrow 2x = \frac{\sqrt{33} - 1}{2}, 2x = -\frac{\sqrt{33} + 1}{2}$

$\Rightarrow x = \frac{\sqrt{33} - 1}{4}$

$\Rightarrow x = -\frac{\sqrt{33} + 1}{4}$

\therefore roots are

$\frac{\sqrt{33} - 1}{4}, -\frac{\sqrt{33} + 1}{4}$

$$\left[\begin{array}{l} 2ab = 2x \\ 2 \times 2x \times b = 2x \\ b = \frac{2x}{4x} \\ \Rightarrow b = \frac{1}{2} \end{array} \right]$$