

$$x^2 - ax + 8 = 0$$

$$x, x^2 \rightarrow S = \frac{-b}{a} = 8 \rightarrow \frac{a}{x} = 8 \rightarrow 11a = a$$

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$$\rightarrow P = \frac{c}{a} = x^2 \rightarrow \frac{8}{x} = x^2 \rightarrow x^3 = 8 \rightarrow x = 2$$

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$$4x^2 - (m+12)x + 1 = 0$$

$$m^2 + 12m + 12 = \frac{1}{a} = \frac{1}{m} \rightarrow \frac{1}{m} = \frac{-2}{a} = \frac{c}{a}$$

$$\sqrt{\frac{1}{a}} + \sqrt{\frac{1}{b}} = 0$$

$$S = \frac{m+12}{4}$$

$$P = \frac{1}{4}$$

$$20 \rightarrow \frac{1}{a} + \frac{1}{b} = 20 \rightarrow \frac{a+b}{ab} + 2\sqrt{\frac{1}{ab}} = 20 \Rightarrow 4(a+b) + 12 = 20$$

$$4(a+b) = 8$$

$$a+b = \frac{12}{4} = \frac{m+12}{4} \rightarrow m = -1$$

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$$x^2 + kx - 9x - 2 = 0$$

$$x + \beta = 1 \rightarrow \beta = 1 - \alpha$$

$$\alpha\beta = -2$$

$$\rightarrow \alpha(1-\alpha) = -2$$

$$\alpha - \alpha^2 = -2$$

$$\alpha^2 - \alpha - 2 = 0$$

$$(\alpha - 2)(\alpha + 1) = 0$$

$$\alpha = 2 \rightarrow 4 + 2k - 18 - 2 = 0 \rightarrow 2k = -12 \rightarrow k = -6$$

$$\alpha = -1 \rightarrow -1 + k + 9 - 2 = 0 \rightarrow k = -6$$

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$$x^2 + 4x + a = 0 \rightarrow \alpha + \beta = \frac{-b}{a} = -4 \rightarrow \alpha^2 + \beta^2 = (\alpha + \beta)^2 - 2\alpha\beta = 16 - 2a$$

$$\alpha\beta = a$$

$$\alpha < \beta < 0$$

$$\alpha^2 - \beta^2 = (\alpha + \beta)(\alpha - \beta) = -4(\sqrt{16 - 4a}) = -12\sqrt{4 - a}$$

$$3\alpha^2 + 2\beta^2 = 12\sqrt{4 - a} + 10 \rightarrow 3\alpha^2 + 2\beta^2 + 12\sqrt{4 - a} = 12\sqrt{4 - a} + 10$$

$$\frac{3}{4}(\alpha^2 + \beta^2) + \frac{1}{4}(\alpha^2 - \beta^2) = 9 - 2a - 4\sqrt{4 - a} = 12\sqrt{4 - a} + 10$$

$$4\sqrt{4 - a} = 9 - 2a - 12\sqrt{4 - a} + 10 = 19 - 2a - 12\sqrt{4 - a}$$

$$16\sqrt{4 - a} = 19 - 2a \rightarrow 16\sqrt{4 - a} = 19 - 2a \rightarrow 256(4 - a) = (19 - 2a)^2$$

$$256(4 - a) = 361 - 76a + 4a^2 \rightarrow 4a^2 - 104a + 11 = 0$$

$$a = 1 \rightarrow a = \frac{11}{4}$$

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$$x^2 - vx - 5 = 0$$

$$x = t$$

$$t^2 - vt - 5 = 0 \rightarrow t = \frac{v \pm \sqrt{v^2 + 20}}{2}$$

$$t = \frac{v + \sqrt{v^2 + 20}}{2} \rightarrow t = \frac{v - \sqrt{v^2 + 20}}{2}$$

$$P = -\frac{v + \sqrt{v^2 + 20}}{2}$$

$$S = 0 \rightarrow n = \sqrt{\frac{v + \sqrt{v^2 + 20}}{2}} \rightarrow n = \sqrt{\frac{v - \sqrt{v^2 + 20}}{2}}$$

$$P = -\frac{v + \sqrt{v^2 + 20}}{2} \rightarrow P^2 = \frac{v^2 + 20 + 2v\sqrt{v^2 + 20}}{4} = \frac{11a + 12\sqrt{4a}}{4} = \sqrt{5a + 12\sqrt{4a}}$$

$$r_m^r - a n + b = 0$$

$$\alpha, \beta$$

$$\alpha\beta = \frac{b}{r}$$

$$\alpha + \beta = \frac{a}{r}$$

$$\left[\frac{ab}{r} \right] = \left[\frac{-4}{r} \right] = \left[-1 \right]$$

$$r_m^r + a n - 4 = 0$$

$$\alpha = -1, \beta = -1$$

$$\rightarrow S: \alpha + \beta = -1 = \frac{a}{r} - 1 = \frac{-b}{a} \rightarrow \frac{a}{r} - 1 = \frac{-a}{r} \rightarrow \frac{1}{r} = \frac{a}{r} - 1$$

$$\rightarrow P: \alpha\beta = \frac{1}{r}(\alpha + \beta) + \frac{1}{r} = \frac{1}{r} \rightarrow \frac{b}{r} = \frac{1}{r} \rightarrow \frac{b}{r} = -1 \rightarrow b = -r$$

$$a n^r - a n - b = 0$$

$$\alpha, \beta$$

$$\alpha + \beta = 1 \rightarrow \alpha = 1 - \beta$$

$$\alpha\beta = \frac{-b}{a} = \beta(1 - \beta) =$$

$$\beta - \beta^2 = \frac{-b}{a}$$

$$\beta^2 - \beta = \frac{b}{a}$$

$$\varepsilon_1 \beta^r + r_1 \alpha^r - r_1 \beta = 1$$

$$r_1 \beta^r + r_1 (\alpha + \beta)^r - r_1 \beta = 1$$

$$r_1 (\alpha^r + \beta^r) + r_1 (\beta^r - \beta) = 1$$

$$(\alpha + \beta)^r + \frac{r_1 b}{a} \rightarrow -r_1 \beta = 1$$

$$r_1 (1 + \frac{r_1 b}{a}) + \frac{r_1 b}{a} = 1$$

$$r_1 + \frac{\varepsilon_1 b}{a} + \frac{r_1 b}{a} = 1$$

$$\frac{\varepsilon_1 b}{a} = -\varepsilon \rightarrow a = -r_1 b$$

$$\frac{\sqrt{D}}{10a} = \frac{\sqrt{a^2 + \varepsilon a b}}{a} = \frac{\sqrt{\varepsilon_1 b^2 - 1 \cdot b^2}}{-r_1 b} = \frac{\sqrt{r_1 b^2}}{-r_1 b} = \frac{\sqrt{r_1}}{-1}$$

$$n^r - (a+1)n + a = 0 \rightarrow S: a+1 = \varepsilon k + 1 \rightarrow a = \varepsilon k + \varepsilon \quad P: a = \varepsilon k^r + \varepsilon k + \varepsilon$$

$$n^r - (r a + 1)n + b = 0 \rightarrow S: r a + 1 = \varepsilon t + r \quad P: b = \varepsilon t^r + \varepsilon t$$

$$a = r \rightarrow 1 = \varepsilon t + r \rightarrow \varepsilon t = 1 - r \rightarrow \varepsilon = 1 - r \rightarrow \varepsilon = 1 - r$$

$$P: \frac{b}{a} = \frac{\varepsilon t^r + \varepsilon t}{\varepsilon k^r + \varepsilon k + \varepsilon} = \frac{1 - r}{1 - r} = 1$$

$$n^r + n - 1 - m^r = 0$$

$$\alpha, \beta$$

$$\alpha + \beta = (\alpha + \beta)^r - r \alpha \beta = 1 + r_1 m^r$$

$$r_m^r + r$$

$$a \min \rightarrow \frac{-b}{r a} = \left[\frac{0}{r} \right] = \left[\frac{0}{r} \right]$$

$$\rightarrow \left[\frac{0}{r} \right] = \left[\frac{0}{r} \right]$$

$$A: \begin{bmatrix} r \\ y \end{bmatrix} \quad B: \begin{bmatrix} -r \\ y \end{bmatrix}$$

$$m_{11} = 1$$

$$m_{12} = \alpha + \beta$$

$$\alpha + \beta = 0$$

$$y = a n^r + b n + c$$

$$A \rightarrow a a + r b + c = y$$

$$B \rightarrow -r a + 0 b + c = y$$

$$-14a + 17b = 5$$

$$14a = 17b$$

$$r a = b \rightarrow y = a n^r + r a n + c$$

$$y = a n^r + r a n - \frac{a}{r}$$

$$m_{11} = 1 \rightarrow c = -\frac{a}{r} = -\frac{1}{r} \left(\frac{-r}{r} \right) = \left(\frac{1}{r} \right)$$

$$m_{11} = 1 \rightarrow -\frac{\Delta}{\varepsilon a} = 1 \rightarrow -\frac{(\varepsilon a + r a)}{r \varepsilon a} = 1 \rightarrow \frac{-r}{r a} = 1 \rightarrow a = -r$$