

(۱)

$$\frac{-b}{2a} = 2 \rightarrow \frac{-1}{2a-2} = 2 \rightarrow \{a - \varepsilon = -1 \rightarrow \{a = \varepsilon \rightarrow a = \frac{\varepsilon}{\varepsilon}$$

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

عق و $x = -2$

$x = 4$

(۲)

$m < 0$ (۱)

$$\Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow 2a - 4m^2 > 0 \rightarrow 4m^2 < 2a \rightarrow m^2 < \frac{2a}{\varepsilon}$$

$$\rightarrow \frac{-a}{2} < m < \frac{a}{2} \quad (۲)$$

(۱) $\cap$ (۲) $\Rightarrow$
 $\frac{-a}{2} < m < 0$

(۳)

$$S = \frac{c + \sqrt{a}}{c} + \frac{c - \sqrt{a}}{c} = 2$$

$$P = \frac{c + \sqrt{a}}{c} \times \frac{c - \sqrt{a}}{c} = \frac{a - a}{a} = \frac{\varepsilon}{a}$$

$$x^2 - 5x + P = 0 \rightarrow x^2 - 2x + \frac{\varepsilon}{a} = 0 \rightarrow 9x^2 - 18x + \varepsilon = 0$$

(۴)

$$S = \varepsilon \quad \beta = \varepsilon - \alpha$$

$$2\alpha^2 + (\varepsilon - \alpha)^2 = 12$$

$$2\alpha^2 + 1\varepsilon + \alpha^2 - 18\alpha = 12 \rightarrow 3\alpha^2 - 18\alpha + \varepsilon = 0 \rightarrow \alpha^2 - 2\alpha + 1 = 0$$

$$\rightarrow (\alpha - 1)^2 = 0 \rightarrow \alpha = 1$$

$$2 - 18 + m - 2 = 0 \rightarrow m = \varepsilon$$

(۵)

$$y = a(x-2)^2 + 9$$

$$\varepsilon a + 9 = 0$$

$$a = -1$$

$$-(x-2)^2 + 9 > 0$$

$$(x-2)^2 - 9 < 0$$

$$x^2 + \varepsilon - \varepsilon x - 9 < 0 \rightarrow x^2 - \varepsilon x - 9 < 0$$

$$\rightarrow (x-5)(x+1) < 0$$

$(-1, 5)$

$$\begin{array}{c} -1 \quad 5 \\ + \phi - \phi + \end{array}$$

$$P = \alpha/\beta = \frac{9\beta}{\alpha} \quad \alpha/\beta = 9/\beta \rightarrow \alpha^r = 9 \rightarrow \alpha = \pm 3$$

(9)

$$\alpha = 3 \rightarrow \frac{v}{c} = 3 + 1/3 \rightarrow 1/3 = \frac{-2}{c} \quad \text{Q. Q. 2}$$

$$\alpha = -3 \rightarrow \frac{-v}{c} = -3 + 1/3 \rightarrow \boxed{1/3 = \frac{1}{c}, \alpha = -3}$$

$$S = \frac{v}{\alpha}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{-1}{c} + \frac{c}{1} = \left(\frac{v}{1}\right)$$

(✓)

$$\beta^r + m/\beta - 1m = 0 \rightarrow \beta^r - 1m = -m/\beta$$

$$\alpha^r - m/\beta = 1 \rightarrow \underbrace{\alpha^r + \beta^r}_{S^r - 1P} - 1m = 1 \Rightarrow m^r + 1m - 1m - 1 = 0$$

$$\rightarrow m^r + 1m - 1 = 0 \rightarrow (m+1)(m-1) = 0 \quad \begin{cases} m = -1 \\ m = 1 \end{cases}$$

$$m = -1 \rightarrow x^r - 1x + 1 = 0 \rightarrow \Delta < 0 \quad \text{Q. Q. 2}$$

$$m = 1 \rightarrow x^r + 1x - 1 = 0 \rightarrow S = \frac{-b}{a} = \boxed{-1}$$

$$m < 0$$

(11)

$$\frac{-\Delta}{2a} = 1 \rightarrow 1/2a = -1 \rightarrow -(1/2 - 1/2(m)(\frac{m}{1} + 1)) = 1/2m$$

$$\rightarrow -1/2 + 1/2m^r + 1/2m = 1/2m$$

$$\rightarrow 1/2m^r - 1/2m - 1/2 = 0$$

$$\rightarrow m^r - 1m - 1 = 0 \rightarrow (m-1)(m+1) = 0 \rightarrow m = 1 \quad \text{Q. Q. 2}$$

$$m = -1 \quad \checkmark$$

$$-1x^r + 1x + 1 = 0$$

$$x^r - 1x - 1 = 0 \rightarrow (x-1)(x+1) = 0 \rightarrow \boxed{x=1} \rightarrow \boxed{x=-1} \quad \text{Q. Q. 2}$$

$$y = a(n-1)^r + 4$$

$$\sum a + 4 = \sum \rightarrow a = \frac{-1}{r}$$

$$\frac{-1}{r} (n^r - \sum n + \sum) + 4 \Rightarrow \frac{-1}{r} n^r + r n - r + 4 \rightarrow \frac{-1}{r} n^r + r n + \sum$$

$$\rightarrow -n^r + \sum n + 1$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = \frac{5}{p} = \frac{\sum}{-1} = \left(\frac{-1}{r}\right)$$

$$\sum a + \sum = r + 13$$

$$r a^r + 4a + c = r 13$$

$$c a^r + 4a + c = 1 a + \sum$$

$$r a^r - r a - 1 = 0 \rightarrow c a^r - r a - c = 0 \rightarrow (a - c)(a + 1) = 0$$

$$\rightarrow a = \frac{-1}{c} \rightarrow n^r - \frac{1}{c} n + \frac{\sum}{c} = 0 \rightarrow c n^r - 1 n + \sum = 0 \rightarrow \frac{n}{n} = \frac{r}{c}$$

$$\rightarrow a = \frac{c}{c} = 1 \rightarrow n^r - 1 n + 1 r = 0 \rightarrow (n - r)(n - 4) = 0 \rightarrow \begin{matrix} n = 4 \\ n = r \end{matrix}$$

$$\boxed{n = 4, \frac{p}{r}}$$