

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

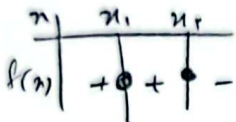
$$\frac{-1}{2(a-1)} = 2 \Rightarrow -1 = 4a - 4 \Rightarrow a = \frac{3}{4} \Rightarrow -\frac{1}{2}x^2 + x + 2 = 0$$

$$\Delta = 1 - 4 \times -\frac{1}{2} \times 2 = 5$$

$$\frac{-1 \pm \sqrt{5}}{2 \times -\frac{1}{2}} = \begin{cases} + & x = 2 \text{ و } 3 \\ - & x = 4 \text{ و } 5 \end{cases}$$

$$f(x) = mx^2 - 2x + m$$

① $x < 0 \rightarrow$ چون بین دو نقطه
دو نقطه داریم



$$\textcircled{2} \Delta > 0 \rightarrow +2d - 4m^2 > 0 \rightarrow -\frac{d}{4} < m < \frac{d}{4}$$

$$\textcircled{1} \cap \textcircled{2} = -\frac{d}{4} < m < \frac{d}{4}$$

$$y = ax^2 + bx + c \rightarrow a(x^2 - 5x + 6) = 0$$

$$s = \frac{5 - \sqrt{1}}{2} + \frac{5 + \sqrt{1}}{2} = \frac{10}{2} = 5$$

$$p = \frac{5 - \sqrt{1}}{2} \times \frac{5 + \sqrt{1}}{2} = \frac{25 - 1}{4} = \frac{24}{4} = 6$$

$$\Rightarrow x^2 - 5x + 6 = 0 \Rightarrow \underline{x^2 - 11x + 6 = 0}$$

$$x^2 - 2x + m + 2 = 0 \quad \alpha < \beta \quad 2\alpha^2 + \beta^2 = 12$$

$$p = \alpha\beta = \frac{m+2}{1}$$

$$s = \alpha + \beta = \frac{2}{1} = 2 \Rightarrow \beta = 2 - \alpha \Rightarrow \beta^2 = (2 - \alpha)^2$$

$$\rightarrow \alpha + \beta = 2 \Rightarrow \beta = 2$$

$$\rightarrow \frac{m+2}{1} = \alpha\beta \rightarrow m+2 = 4 \rightarrow m = 2$$

$$\left. \begin{aligned} 2\alpha^2 + (2-\alpha)^2 &= 2\alpha^2 + 4 - 4\alpha + \alpha^2 = 12 \\ \Rightarrow 3\alpha^2 - 4\alpha + 4 &= 12 \Rightarrow 3\alpha^2 - 4\alpha - 8 = 0 \\ \Rightarrow (3\alpha + 4)(\alpha - 2) &= 0 \Rightarrow \alpha = 2 \end{aligned} \right\} \Rightarrow \underline{\alpha = 2}$$

$$s \begin{Bmatrix} 1 \\ 2 \end{Bmatrix} C = 0 \quad y = a^2(x-h)^2 + k \rightarrow y = a(x-2)^2 + 1 \rightarrow -x^2 + 4x + 1$$

$$\hookrightarrow \Delta = 0 \rightarrow \Delta = a(-2)^2 + 1 \Rightarrow 4a + 1 = 0 \Rightarrow a = -\frac{1}{4}$$

$$\begin{array}{c|c|c} -1 & 4 & \\ \hline - & + & - \end{array} \Rightarrow \underline{(-1, 4)}$$

$$a x^r - v x + 9 \beta = 0$$

$$\rho = \kappa \beta = \frac{9 \beta}{\alpha} \rightarrow a = \frac{9}{\alpha} \rightarrow x - \frac{9}{\alpha} = 0 \rightarrow \frac{x^r - 9}{\alpha} = 0 \rightarrow \alpha = \pm 9$$

$$\rightarrow a = +9 \rightarrow 9 + \beta = \frac{v}{r} \Rightarrow \beta = -\frac{v}{9} \alpha$$

$$\rightarrow a = -9 \rightarrow -9 + \beta = -\frac{v}{r} \rightarrow \beta = \frac{v}{9} \checkmark$$

$$\frac{1}{x} + \frac{1}{\beta} = 2 \Rightarrow \frac{1}{-9} + \frac{1}{\frac{v}{9}} = -\frac{1}{9} + \frac{9}{v} = \frac{v}{y} \Bigg]$$

$$x^r + m x - r m = 0, \quad a^r = m \beta = \lambda$$

$$\beta^r - r m = -m \beta \rightarrow a^r + \beta^r - r m = \lambda \rightarrow m^r + \epsilon m - r m = \lambda \rightarrow m^r + r m - \lambda = 0 \rightarrow (m + \epsilon)(m - r) = 0$$

$m = -\epsilon$
 $m = r$
33c

$$a^r + \beta^r = r - r \rho = m^r + \epsilon m$$

$$s = -m$$

$$\rho = -r m$$

$$s = \begin{cases} \epsilon \\ -r \end{cases}$$



$$f(x) = m x^r + \epsilon x + \frac{m}{r} + v \rightarrow -r a^r + \epsilon x + r = 0 \Rightarrow x^r - r x - r = 0 \Leftarrow \frac{1}{r}$$

$$\frac{+14 - \epsilon m (\frac{m}{r} + v)}{\epsilon m} = -1 \rightarrow 14 - r m^r + r \lambda m = -r \epsilon m$$

$$r m^r - \epsilon m = 14 = 0$$

$$m^r - r m - \lambda = 0$$

$$(m - \epsilon)(m + r) = 0 \rightarrow \begin{cases} \epsilon = 33c \\ -r \checkmark \end{cases}$$

$$\Delta > 0 \rightarrow 14 - r m^r - r \lambda m \rightarrow m = \epsilon \rightarrow \Delta < 0$$

$$-r \rightarrow \Delta > 0$$

$$\boxed{r = r}$$

$$s = a(m - r)^r + \frac{1}{r} \rightarrow f = a(\epsilon) + v \Rightarrow a = -\frac{1}{r} \rightarrow y = -\frac{1}{r}(x^r - \epsilon x + \epsilon) + v$$

$$x^r - (\epsilon a + \epsilon) x + (r a^r + \gamma a + r) = 0$$

$$x = r \rightarrow \epsilon - \lambda a - \lambda + r a^r + \gamma a + r = 0 \rightarrow r a^r - r a - 1 = 0 \Rightarrow \frac{1}{r}$$

$$\Delta > 0 \rightarrow (\epsilon a + \epsilon)^r - \epsilon(r a^r + \gamma a + r) > 0 \Rightarrow \begin{cases} a = 1 \rightarrow \Delta < 0 \\ a = -\frac{1}{r} \rightarrow \Delta < 0 \end{cases}$$

$$\Rightarrow a = 1 \rightarrow x^r - \lambda x + 11 = 0 \Rightarrow \frac{r}{r}$$

$$\rightarrow a = -\frac{1}{r} \rightarrow x^r - \frac{\lambda}{r} x + \frac{\epsilon}{r} \rightarrow r x^r - \lambda x + \epsilon = 0 \Rightarrow \frac{r}{r}$$