

$$\boxed{\frac{-1}{2}}$$

$$y = x^2 - 2x + 1$$

$$a=1, a>1$$

$$\Delta < 0$$

$$x_1 = \frac{-1 \pm \sqrt{1-4}}{2} = 1$$

$$y_1 = 1$$

$$\boxed{\frac{2}{-1}}$$

$$y = -x^2 + 2x - 1$$

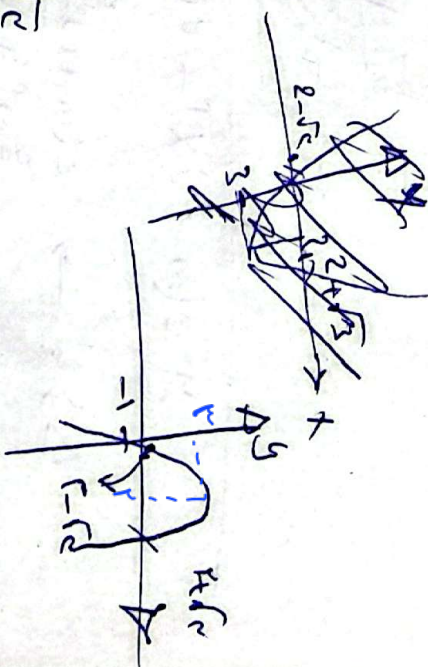
$$\Delta < 0$$

$$x_1 = \frac{-1 \pm \sqrt{1-4}}{2} = 1$$

$$y_1 = 1$$

$$x_{1,2} = \frac{-1 \pm \sqrt{1-4}}{2} = 1 \pm \sqrt{c}$$

$$x_1 = \frac{-1 + \sqrt{1-4}}{2} = 1 - \sqrt{c}$$



$$y = x^2 + (m+1)x + \frac{1}{2}m + 1 = 0$$

$$\textcircled{2}$$

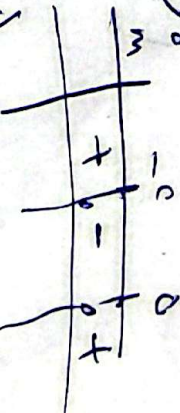
$$\Delta > 0 \rightarrow (m+1)^2 - 4 \left(\frac{1}{2}m + 1 \right) > 0$$

$$m^2 + (m+1) - 2m - 1 > 0$$

$$m^2 - m - 1 > 0$$

$$(m-0)(m+1)$$

$$m < -1, m > 1$$



$$\Delta = 0 \rightarrow m = \frac{1}{2}, m = 1$$

5

$$\Delta < 0 \rightarrow -1 < m < 1$$

$$m < -1, m > 1$$

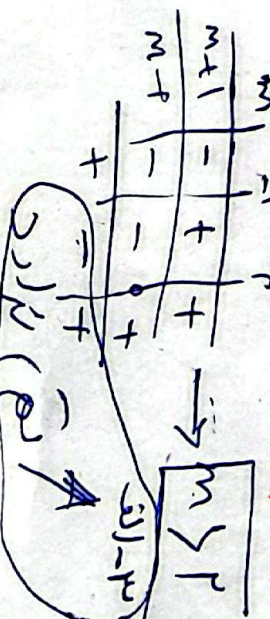
$$\textcircled{3}$$

$$(x_1, y_1) < 0 \rightarrow \frac{1}{2}m + 1 > 0 \rightarrow m > -2$$

$$x_1 + x_2 < 0$$

$$-\frac{1}{2} < 0 \rightarrow \frac{1}{2}(m+1) < 0 \rightarrow m < -1$$

$$x_1 < x_2$$



1/10

1/10

1.1

$$x_1 + x_r < 0 \quad -\frac{b}{a} r < 0 \quad r \frac{(m+1)}{m-r} < 0$$

$$x_1 x_r < 0 \quad \frac{c}{a} \cancel{x_0} \rightarrow \frac{1_0}{m-r} \cancel{x_0} \rightarrow m \cancel{x_r}$$

m	-1	r	
m+1	-	+	+
m+r	-	-	+
	+	-	+

$\cup \quad \boxed{-1 < m < r}$

$$y = (m-r)x_r - r(m+1)x + 1_0$$

$$\Delta > 0 \rightarrow \varepsilon(m+1)r - \varepsilon_0(m-r) > 0$$

$$\varepsilon m r + \lambda m + \varepsilon - \varepsilon m + \lambda_0 > 0$$

$$m^2 - \lambda m + r > 0 \quad \checkmark \rightarrow (+)$$

$$\frac{c}{a} < 0 \rightarrow \frac{1_0}{m-r} < 0 \rightarrow (m < r)$$

$$\boxed{m < r}$$

5

$$-1) x_B = -r \rightarrow \frac{x(m+1)}{x(m-r)} = -r \rightarrow -\frac{r_{m+1} - m+1}{m-1}$$

$$(3) \quad \frac{r}{r} x^2 - (r \sin \alpha) x + \frac{c}{r} = 0$$

$$\Delta \geq 0 \rightarrow \begin{aligned} & \varepsilon \sin^2 \alpha - \varepsilon \left(\frac{r}{r}\right) \left(\frac{r}{r}\right) \geq 0 \\ & \frac{c}{a} > 0 \end{aligned}$$

$$\varepsilon \sin^2 \alpha - \varepsilon = -\varepsilon \cos^2 \alpha > 0 \rightarrow \Delta = 0$$

$$\text{عند } \alpha = 0 \rightarrow \frac{a}{r}, \frac{r}{r}, -$$

$$-\frac{b}{a} > 0 \rightarrow \frac{r \sin \alpha}{\frac{r}{r}} = c \sin \alpha > 0 \rightarrow \left(\alpha = \frac{\pi}{r} \right) \quad \boxed{x = \frac{c}{r}}$$

$$\boxed{\alpha = \frac{\pi}{r}} \rightarrow \begin{aligned} & \frac{r}{r} x^2 - r x + \frac{c}{r} = 0 \\ & x^2 - r x + \frac{c}{r} = \left(x - \frac{r}{r}\right)^2 = 0 \end{aligned}$$

$$(4) \quad y = \frac{(rx+1)(x-1) + (x+1)(r-1)(-1)}{(x+1)(x-1)} = \frac{(rx+1)(x-0)(-1)}{(x+1)(x-1)} \quad \begin{matrix} x \neq 1 \\ x \neq -1 \end{matrix}$$

$$f(x) = -rx^2 + 1x + 0$$

$$\boxed{y_5 = -\frac{\Delta}{\varepsilon a} = 1r}$$

$$x_5 = \frac{+1r}{1r} \rightarrow y_5 = \frac{1x}{1x \cdot 1r} + \frac{1}{1r} + 1$$

$$y = \frac{rx}{rx}$$

$$= \frac{1}{rx} + \frac{1}{rx} + \frac{rx}{rx} = \frac{rx}{rx}$$

$$y_{\max} = \frac{rx}{rx}$$

$$(5) \quad mx^2 - (m+r) - r = 0$$

$$r(\alpha + \beta) - 0 \alpha \beta = V$$

$$\alpha^r + \beta^r = ?$$

$$\frac{r(m+r)}{m} + \frac{10}{m} = V \rightarrow \boxed{m = 2}$$

$$\varepsilon x^2 - 9x - r = 0 \rightarrow (\alpha + \beta)^r - r \alpha \beta = \left(\frac{9}{\varepsilon}\right)^r - r \left(-\frac{r}{\varepsilon}\right)$$

$$\alpha^r + \beta^r = \frac{10}{\varepsilon}$$

$$= \frac{r^2}{14} + 1 = \frac{1r}{\varepsilon}$$

(1)

$$\frac{\partial \alpha + B^0}{\partial B^r} = ?$$

$$X^r - \partial X + r = 0$$

$$\begin{aligned} \alpha + B &= 0 \\ \alpha B &= r \rightarrow \alpha = \frac{r}{B} \rightarrow B + \frac{r}{B} = 0 \\ B^r + rB & \end{aligned}$$

$$\frac{\alpha^r + B^r}{\omega} = \frac{5^r - 5p}{\omega} = 19$$

$$\begin{cases} B^r - \partial B + r = 0 \\ B^r = \partial B + r \\ \partial B^r = r \partial B + 1 \quad \checkmark \quad (1) \\ \alpha = 0 - B \quad \checkmark \quad (2) \end{cases}$$

(1)

$$\frac{\partial \alpha + B^0}{\partial B^r} = \frac{r_0 - \partial B + B^0}{\partial B^r} = \frac{r_0 - \partial B + B(B^r)^r}{r_0 B + 1}$$

179

$$r_0 - \partial B + B(r_0 B^r + 1) = (r_0 B + 1)$$

$$B^0 = (B^r)^r \times B = (B^r - \partial B + r)^r \times B =$$

$$\begin{aligned} B^r = \partial B + r &\rightarrow B^r = r_0 B^r + r_0 B + \partial \\ &= r_0 B + \partial + r_0 B + \partial \\ &= 1 r_0 B + \partial \end{aligned}$$

$$\begin{aligned} &= 1 r_0 B^r + \partial \partial B \\ &= 1 r_0 (\partial B + r) + \partial \partial B \\ &= r_0 B + r_0 + \partial \partial B \\ &= r_0 B + r_0 + r_0 - \partial B \leq \frac{r_0}{r_0} \end{aligned}$$

$$X^r + Y X + Z = 0$$

$$2Y - 1 = 2$$

$$\begin{array}{c|c} - & \checkmark \\ \hline 1 & \\ 2 & \\ \hline 1 & \\ 2 & \end{array}$$

$$\frac{A + B^r}{\partial B^0}$$

0
1
+
2
+
2

$$\begin{aligned} B^r &= (\partial B + r)^0 = \\ B^r &= \partial B^r + r \\ B^r &= r_0 B + 1 \end{aligned}$$

$$\frac{r_0}{r_0} = \frac{r_0}{r_0}$$

9

$$\begin{aligned} x=2 \rightarrow y=1 &\rightarrow 1 = 2a + 1b + 1 \rightarrow 2a + b = 0 \\ x=-1 \rightarrow y=2 &\rightarrow 2 = 1a - 1b + 1 \rightarrow a - b = 1 \\ c=1 & \end{aligned}$$

$$\begin{cases} 2a + b = 0 \\ 2a = b \end{cases} \rightarrow \begin{aligned} a &= 1 \\ b &= 2 \\ c &= 1 \end{aligned}$$

5

$$f(x) = 2x^2 + 2x + 1 \rightarrow (x_s = -\frac{c}{a})$$

10

مماس یعنی درجه یک مماس را قطع می‌کند.

$$x > 0 \quad y = x$$

$$y = 2x^2 + (m+1)x + m + 1$$

$$x = 2x^2 + (m+1)x + m + 1 \rightarrow 2x^2 + mx + m + 1 = 0$$

$$\Delta = m^2 - 4(m+1) = 0$$

$$m^2 - 4m - 4 = 0$$

$$(m+1)(m-4) = 0$$

$$m = -1$$

$$m = 4$$

$$f(x) = 2x^2 - 2x + 1 \rightarrow \sqrt{1} \text{ مماس } (1, 1)$$

$$f(x) = 2x^2 + 5x + 5 \rightarrow \sqrt{5} (-1, -1)$$

$$m = -1 \text{ مماس } (1, 1)$$