

$$g = x^2 - ax + b \quad \begin{array}{c} | \quad | \\ + \quad - \quad + \end{array} \quad (1)$$

$$(x-1)(x-9) = x^2 - \epsilon x + 9 \rightarrow a+b=9$$

-10

$$\begin{array}{c} \epsilon = \dots \\ \text{Gib } x^2 \rightarrow \oplus x^2 \rightarrow \left. \begin{array}{l} K-1 < 0 \\ K < 9 \end{array} \right\} \rightarrow K > 1 \end{array} \quad (1)$$

$$\left(\frac{K-1}{\epsilon} x + m-1 \right) (x-9) =$$

$$\begin{array}{c} \frac{K-1}{\epsilon} \quad 9 \\ + \quad | \quad + \quad | \quad - \end{array} \quad -1 = -\dots \quad -1 - 9m = 0 \quad \frac{9}{\epsilon} + 1 = -1 \epsilon$$

$$\frac{9-m}{\epsilon} \rightarrow \begin{array}{c} m = 9 \\ K = 1 \end{array} \quad \begin{array}{c} \epsilon K = 9 - m \\ K = \frac{9-m}{\epsilon} \end{array}$$

$$(K-1)K + m - 1 = 0 \rightarrow \epsilon K - 1 + m - 1 = 0$$

$$g = \frac{1}{\epsilon} x^2 + 9x + 9 \quad \Delta = K + 1K = 19$$

$$\begin{array}{c} -9b \\ + \quad | \quad - \quad | \quad + \end{array} \quad x_{1,2} = \frac{-1 \pm \epsilon}{-1} \rightarrow -1, +9$$

$$\frac{1}{\epsilon} x^2 + 9x + 9 > \frac{1}{\epsilon}$$

$$\frac{1}{\epsilon} x^2 + 9x + 9 - \frac{1}{\epsilon} > 0$$

$$\Delta = \epsilon + 9 = 9$$

$$\begin{array}{c} -1 \quad a \\ + \quad | \quad - \end{array} \quad \frac{-1 \pm 1}{-1} = -1, \frac{9}{\epsilon}$$

$$(-1, a) = (a, b)$$

$$\boxed{b - a = 9}$$

$$f(x) = x^r - \mu x^r - x + \mu$$

(8)

$$x^r - \mu x^r - x + \mu < 0 \rightarrow x(x^r - 1) - \mu(x^r - 1) = (x - \mu)(x^r - 1) < 0$$

$$f(x) = 1 - 1^r - 1 + 1 = -1$$

$x = \frac{\mu}{x} \Rightarrow x = -1, 1$

$(1, \mu)$

$\mu = \text{Chonkai}$

$$(a-1)x^r + (a-1)x + 1 < 0$$

* * $\rightarrow \emptyset$

$\Delta < 0 \rightarrow (a-1)^2 - 4(a+1) < 0$

$$a-1 < 0$$

$$a < 1^*$$

$$a^r + 1 - \mu a - \epsilon a + \mu < 0$$

$\frac{1}{a} - \frac{1}{b} + \dots \rightarrow 1 < a < \mu$

$$a^r - 4a + 4 < 0 \rightarrow (a-1)(a-4) < 0$$

$$\frac{m(m^r + m)}{m-r} > 0 \rightarrow \frac{m^r(m^r + 1)}{m-r} > 0$$

$$\frac{m-r}{m-r} > 0 \rightarrow m > r$$

$$(x-2)(x+2)$$

$$(x^2 - x - 9)(x+1)^2$$

$$\frac{(x^2 + x + 1)(x-2)^2}{x}$$



$$[-2, 2) \cup [3, +\infty)$$

$$f(x) = \frac{x^2 - x}{x^2 + 3}$$

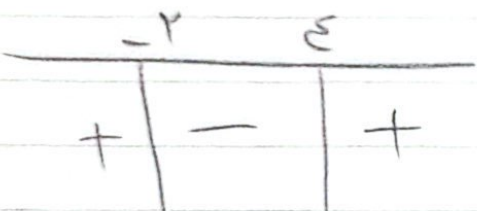
$$(a, b) \rightarrow \frac{x^2 - x - 1}{x^2 + 3}$$

$$\frac{x^2 - x}{x^2 + 3} < 2 \rightarrow \frac{x^2 - x - 2x^2 - 6}{x^2 + 3} < 0$$

$$\frac{x^2 - x - 2x^2 - 6}{x^2 + 3} < 0$$

$$\frac{x^2 - x - 1}{x^2 + 3} < 0$$

$$\frac{(x-2)(x+1)}{x^2 + 3} < 0$$



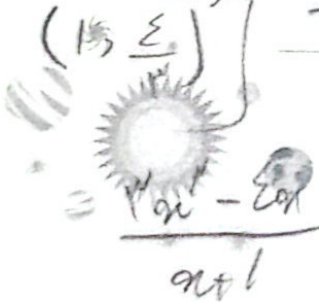
$$(-2, -1) \cup (3, +\infty)$$

$$b - a = 9$$

$$-1 < \frac{x^2 - 3x}{x+1} < 0$$

$$\Delta = 9 - 12 = -3$$

$$\frac{x^2 - 3x}{x+1} + 1 > 0 \rightarrow \frac{x^2 - 3x + x + 1}{x+1} > 0$$



$$\frac{x^2 - 3x}{x+1} < 0 \rightarrow \frac{(x-3)(x+1)}{x+1} < 0$$

	-1	3	∞
	-	+	-

$$\frac{x^2 - 10}{x} \leq 0 \quad \frac{x^2 - 10}{x} \leq 0 \quad (10)$$

$$\frac{(x-10)(x+10)}{x} \leq 0$$

$$\frac{x}{0} \quad \frac{-10 \quad 0 \quad 10}{- \quad + \quad - \quad +}$$

$$(-\infty, -10] \cup (0, 10]$$