

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

$$a+b=V$$

$$a=F$$

$$b=2$$

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

$$x-2 < 0 \rightarrow x < 2 \text{ (موجب، } x < 2 \text{)} \quad x=1$$

$$x^2 - 2x + 2 = 0 \quad x=1, m=0$$

$$\left. \begin{array}{l} \\ \\ \end{array} \right\} \frac{m}{n} + x \rightarrow 1^0$$

$$\frac{-x^2}{1} + 2x + 2 > \frac{V}{1} \rightarrow \frac{-x^2}{1} + 2x + 2, D > 0 \rightarrow \ominus x, \frac{x^2}{1} - 2x - 2, D \rightarrow x^2 - 2x - 2$$

$$\rightarrow (x-2)(x+1)$$

$$\frac{-1}{1} \quad \frac{2}{-1+1}$$

$$b-a \rightarrow 2 - (-1) = 3 \quad (-1, 2)$$

$$\{4, 1\}$$

$$x^2 - 2x - 2 \rightarrow (x-1)(x+1)(x-2) \rightarrow (x^2-1)(x-2)$$

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

$$\rightarrow x > 0$$

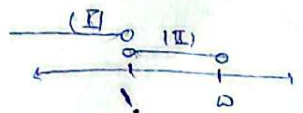
$$(a, b) \rightarrow (1, 2)$$

$$x^2 - 2x - 2 = 0 \rightarrow x = 1 \pm \sqrt{1+2} = 1 \pm \sqrt{3}$$

$$x < 1 - \sqrt{3} \text{ (موجب)}$$

$$\Delta < 0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} a-1 < 0 \rightarrow a < 1 \quad (I)$$

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



$$\frac{1}{1} \quad \frac{2}{-1+1} \quad (II)$$

المجموعة الفعالة $\rightarrow \emptyset$

$a \rightarrow \emptyset$

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

المجموعة الفعالة \emptyset

$m-2 > 0 \rightarrow m > 2$

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



$$[-2, 1) \cup [2, +\infty)$$

$$\frac{x^r - rx}{x^r + \epsilon} < r \rightarrow \frac{x^r - rx - rx^r - 1}{x^r + \epsilon} < 0 \rightarrow \frac{x^r - rx - 1}{x^r + \epsilon} < 0$$

(1)

+ 0/0
 $\rightarrow (x - \epsilon)(x + r) \rightarrow \frac{-r\epsilon}{1 - r, \epsilon}$
 $\frac{a}{b}$
 $b - a = \epsilon - (-r) = r$

$$\frac{x^r - \epsilon x}{x + 1} < 0 \rightarrow \frac{x(x - \epsilon)}{x + 1} < 0 \rightarrow \frac{-1}{-1} < \frac{\epsilon}{x} \rightarrow (-\infty, -1) \cup (0, \frac{\epsilon}{r}) \quad (I)$$

(2)

$$\frac{x^r - \epsilon x}{x + 1} > -1 \rightarrow \frac{x^r - \epsilon x + x + 1}{x + 1} > 0 \rightarrow \frac{x^r - rx + 1}{x + 1} > 0$$

$\rightarrow \Delta < 0 \rightarrow \dots$

$\frac{-1}{-1} > \frac{\epsilon}{x} \quad (II)$



$$\frac{x^r - 1}{x} \leq r \rightarrow \frac{x^r - 1 - rx}{x} \leq 0 \rightarrow \frac{(x - \omega)(x + r)}{x} \leq 0$$

(3)

$\frac{-r}{-1} > \frac{\omega}{-1} \rightarrow (-\infty, -r] \cup [0, \omega]$