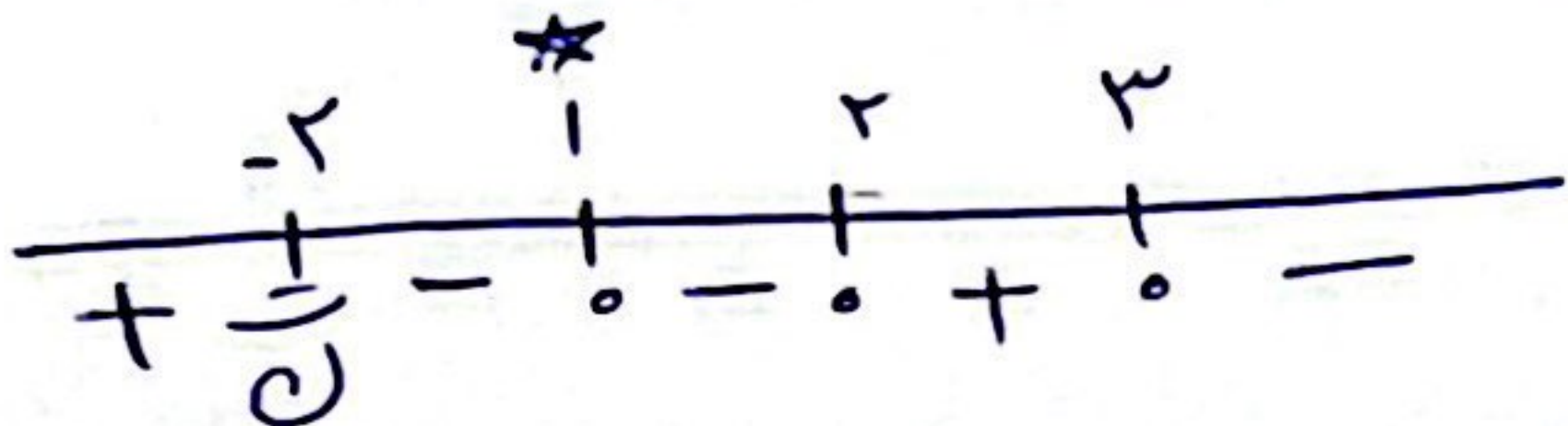


$$\frac{(x-\tau)(x+\tau)(x-1)^r}{(x^2+\tau^2)(\tau-x)^r} \leq 0$$



$$D = [\tau, \tau) \cup [\tau, +\infty)$$

$$a = (x, \tau)$$

$$b = (y, \tau)$$

$$\tau = \frac{\tau x^\tau - \tau x}{x^\tau + \tau} \rightarrow \tau x^\tau + \tau = \tau x^\tau - \tau x$$

$$x^\tau - \tau x - \tau = 0$$

$$(x - \tau)(x + \tau) = 0$$

$$a, b = \tau, -\tau$$

$$\text{Max } b - a = \tau - (-\tau) = \underline{2\tau}$$

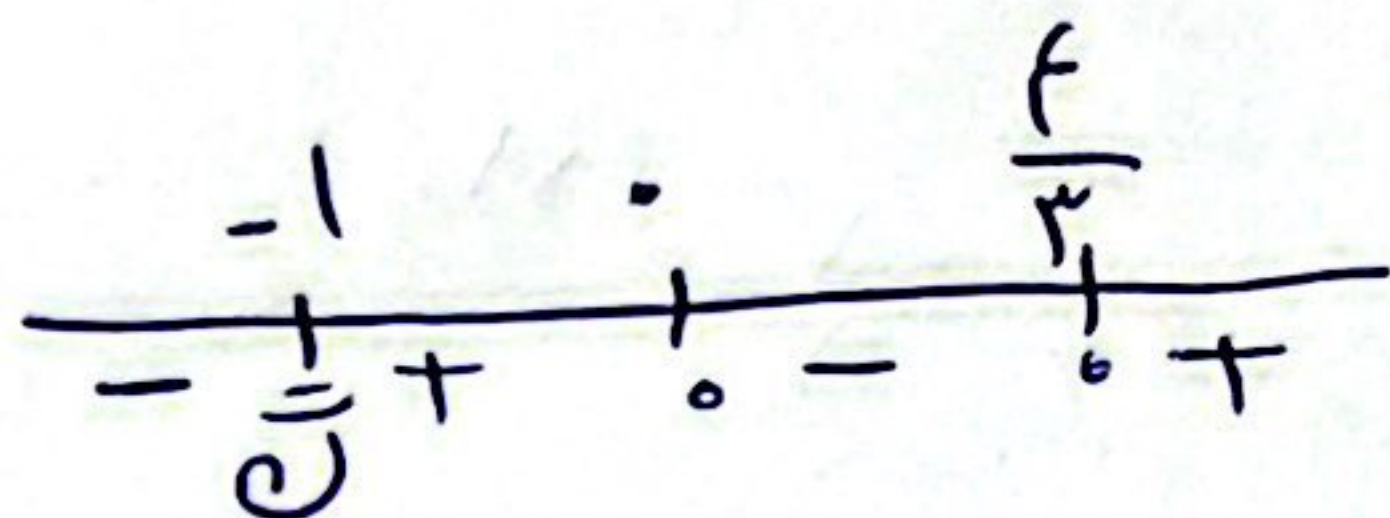
-1

-9

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

$$\tau x^\tau - \tau x = 0$$

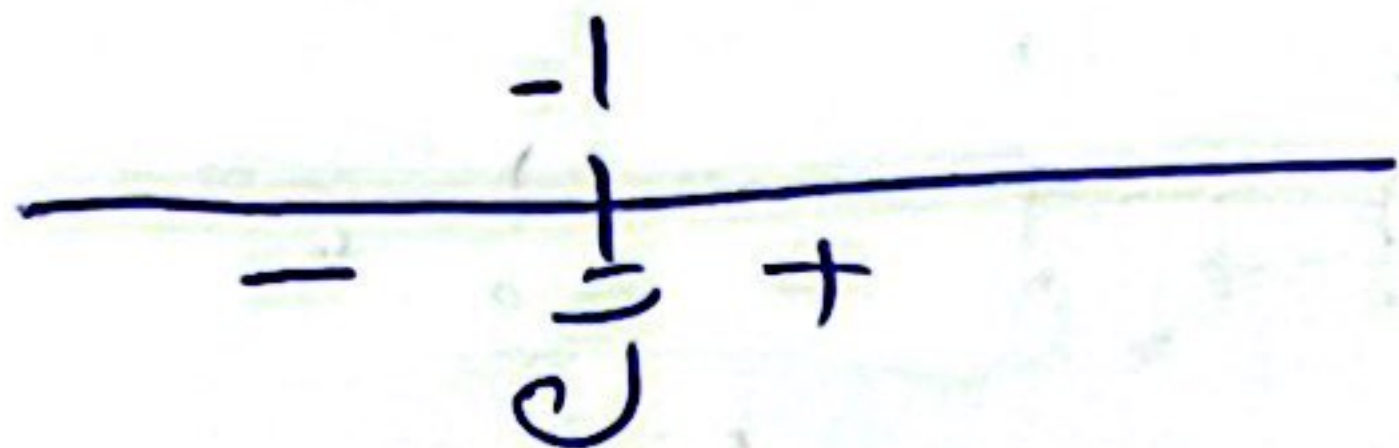
$$x(\tau x - \tau) = 0 \rightarrow x = 0, \frac{\tau}{\tau}$$



$$1 - (-\infty, -1) \cup (0, \frac{\tau}{\tau})$$

$$\tau = \frac{\tau x^\tau - \tau x + 1}{x+1} > 0$$

$$\Delta = 9 - 1\tau = -\tau + 0, \tau$$

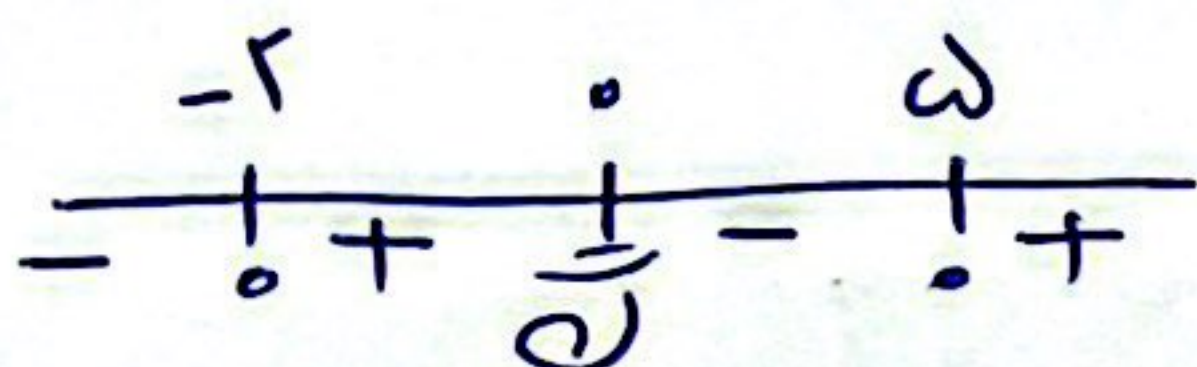


$$\tau = (-1, +\infty)$$

$$1 \cap \tau = (0, \frac{\tau}{\tau})$$

-10

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



$$(-\infty, -\tau] \cup (0, \omega]$$

$$(-1 - \tau n)^r = 0$$

$$n = -\frac{1}{\tau}$$

$$k - \tau < 0$$

$$k < \tau \rightarrow k = 1, \tau$$

$$k=1, x=\tau \rightarrow (k-\tau)\tau + m - 1 = 0 \rightarrow \tau + m = 1$$

$$m = \omega$$

$$\frac{m}{n} + k = \frac{\omega}{-\frac{1}{\tau}} + 1 = \underline{-1\tau}$$

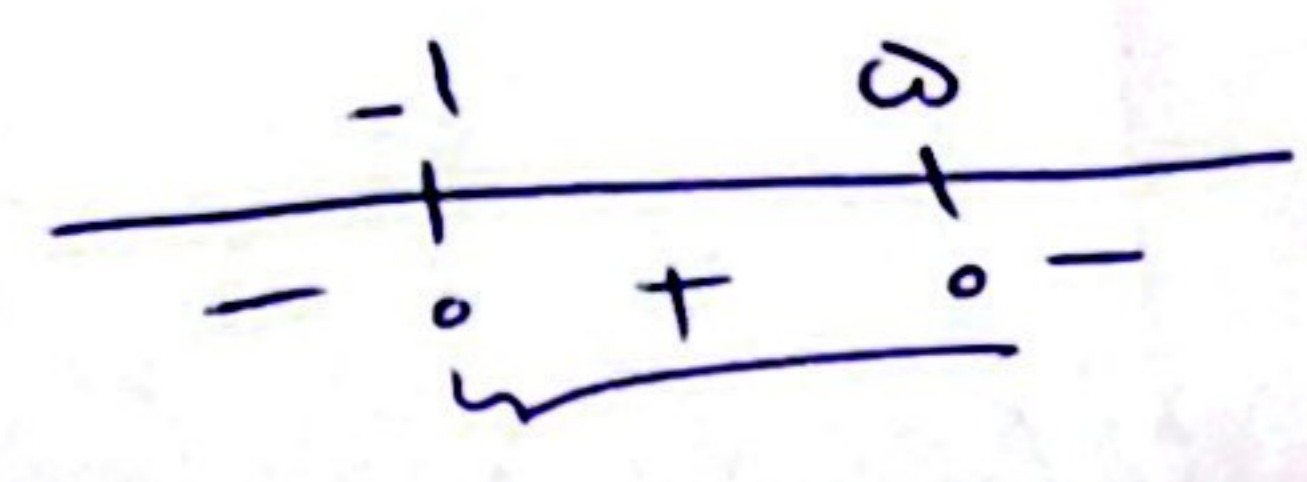
-2

$$\begin{cases} 1-a+b=0 \\ 9-2a+b=0 \end{cases} \Rightarrow \begin{cases} a=1 \\ a=9 \end{cases} \Rightarrow \begin{cases} f-1=b \\ b=3 \end{cases} \Rightarrow a+b = f+3 = \boxed{V}$$

$$-\frac{1}{f}x^2 + (x+4) > \frac{V}{f} \xrightarrow{\times f} -x^2 + (x+4)f > V$$

$$x^2 + (x-5) > 0$$

$$(x+5)(x-1) > 0$$



$$b-a = 5 - (-1) = \boxed{6}$$

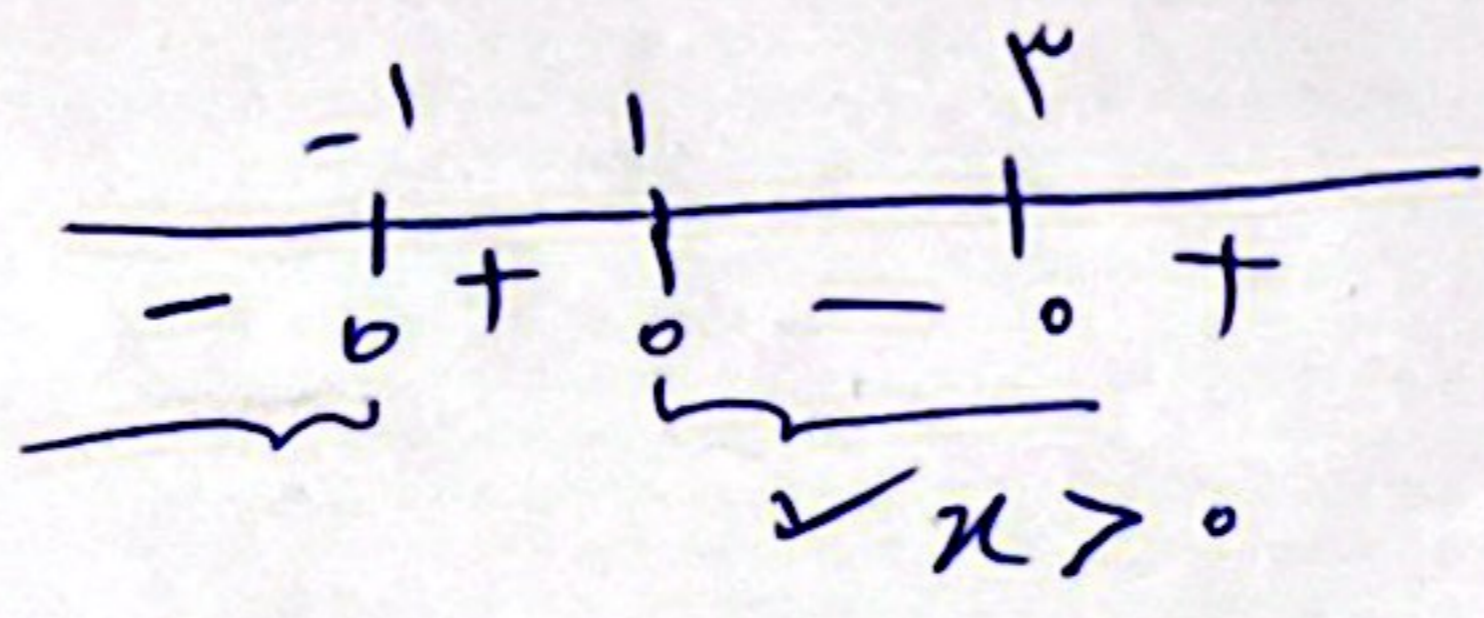
مجموع ضرایب =

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

$$\frac{-2x^2 - x + 3}{-2x^2 + 2x}$$

$$\frac{-2x^2 - x + 3}{-2x + 3}$$

$$(x-1)(x-3)(x+1) < 0$$



$$f(x) = \frac{-4}{-1} - \frac{1}{-2+3} = -3$$

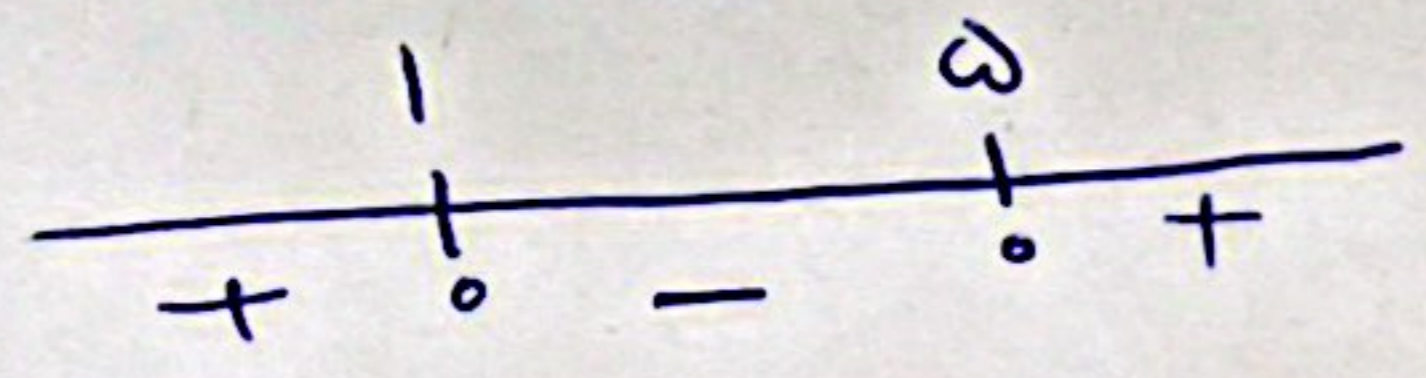
- 1) $a-1 < 0$ 2) $\Delta < 0$

$$a < 1$$

$$a^2 + 1 - (a - (a+1)) < 0$$

$$a^2 - 4a + 5 < 0$$

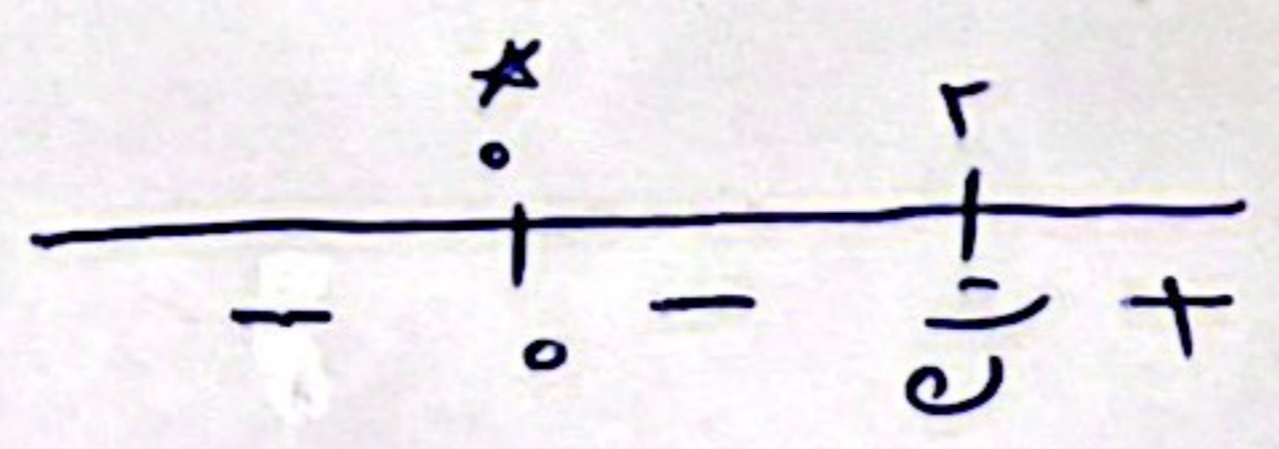
$$(a-1)(a-5) < 0$$



$1 \cap 2 = \emptyset \rightarrow a$ مجموعه‌ای که قرار دارد

$$\frac{m^2 + m^2}{m-2} > 0$$

$m=2, 0$



~~...~~ $(2, +\infty)$ جواب \rightarrow

-1
-2
-3
-4
-5
-6