

$$k(x-1)(x-r) = x^2 - ax + B \quad \left. \begin{array}{l} a=r \\ b=r \end{array} \right\} \Rightarrow a+B = V$$

$$\Rightarrow k=1 \Rightarrow x^2 - rx + r$$

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x	$\frac{-1}{r}$	r
p	$+$	$-$

$$((k-r)x + m - 1)(x - r_n)^r$$

$$-1 \rightarrow \text{discriminant} \rightarrow -1 - r_n = 0 \Rightarrow r_n = -1 \Rightarrow n = -\frac{1}{r}$$

$$k=1 \Rightarrow (\ominus \leftarrow x \rightarrow f(x))$$

$$-x + m - 1 \Rightarrow -r + m - 1 = 0 \Rightarrow m = \Delta$$

$$\frac{m}{n} + k = \frac{\Delta}{-\frac{1}{r}} + 1 = -\Delta + 1 = (-1f)$$

$$-\frac{1}{r}x^2 + rx + \Delta > \frac{V}{f} \Rightarrow -\frac{1}{r}x^2 + rx + \frac{\Delta}{r} \Rightarrow x^2 - rx - \Delta < 0$$

$$\begin{matrix} a & b \\ (-1 & \Delta) \end{matrix} \Rightarrow (b-a) = \Delta - (-1) = \Delta + 1 = \text{max}$$

$$(x-\Delta)(x+1) < 0$$

$\frac{-1}{r}$	Δ
$+$	$-$

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

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

$-$	$+$	$-$	$+$
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$$\Rightarrow (1, r) \Rightarrow \frac{r+1}{r} = |r|$$

$$\text{max } f(r) = \Delta - 1r - r + r = -r$$

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

$$a-1 < 0 \Rightarrow a < 1$$

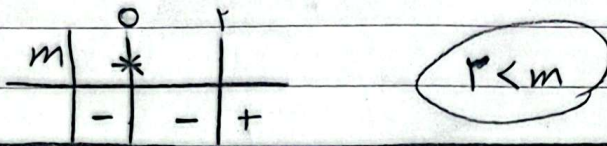
$$\textcircled{2} \Delta < 0 \Rightarrow a^2 - ra + 1 - fa + f < 0 \Rightarrow a^2 - 4a + \Delta < 0 \Rightarrow (a-1)(a-\Delta) < 0$$

$$|nr| \Rightarrow \emptyset$$

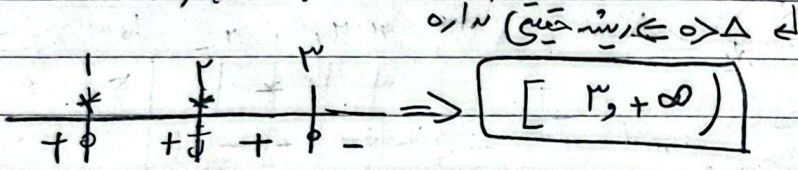
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$$a < a < \Delta$$

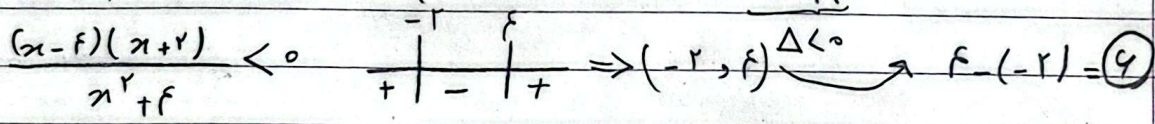
$$\frac{m(m(m^r+1))}{m-r} = \frac{m^r(m^r+1)}{m-r} > 0 \quad \Delta < 0 \quad -4$$



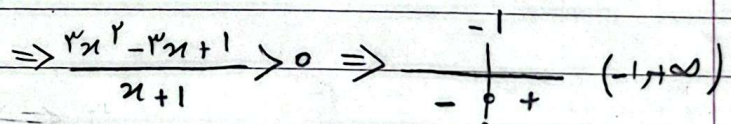
$$\frac{(x-r)(x+r)(x-1)^r}{(x^r+x+1)(r-x)^r} \leq 0 \quad \frac{(x-r)(x-r)(x-1)^r}{(x^r+x+1)(r-x)^r} \quad -5$$



$$\frac{rx^r - rx}{x^r + r} < r \Rightarrow \frac{rx^r - rx}{x^r + r} - r < 0 \Rightarrow \frac{rx^r - rx - r(x^r + r)}{x^r + r} < 0 \quad -6$$



$$-1 < \frac{rx^r - rx}{x+1} < 0 \quad \text{or} \quad \frac{rx^r - rx}{x+1} + \frac{x+1}{x+1} > 0 \quad -7$$



$$\text{or} \quad \frac{rx^r - rx}{x+1} < 0 \Rightarrow \frac{x(rx - r)}{x+1} < 0 \Rightarrow \frac{-1}{x+1} < 0$$

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

$$1 \cap r \Rightarrow (0, \frac{r}{r})$$

$$\frac{x^r - 1}{x} \leq r \Rightarrow \frac{x^r - rx - 1}{x} \leq 0 \Rightarrow \frac{(x-0)(x+r)}{x} \leq 0 \quad -8$$

