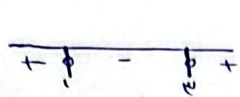


$$x^2 - ax + b$$



$$1(x-1)(x-c)$$

$$x^2 - 4x + 3 \rightarrow \begin{cases} a=4 \\ b=3 \end{cases} \rightarrow a+b \rightarrow 4+3=7 \checkmark$$

$$y = ((k-2)x + m - 1)(x - 3n)^2 \rightarrow \frac{-1}{+p} + \frac{4}{+p} = \frac{3}{-} \rightarrow (x-3n)^2 \rightarrow -1-3n=0 \rightarrow n = -\frac{1}{3}$$

نویس x^2 طبق جدول مشخص کرده دلی
 صریح $(x+1)^2$ نویس x^2 همواره
 + بوده پس

$$k-2 \neq 0 \xrightarrow{k \in \mathbb{N}} k=1 \mid \begin{cases} n=4 \rightarrow -4+m-1=0 \rightarrow m=5 \\ \frac{m}{n} + k = \frac{5}{1} + 1 = 6 \end{cases} \checkmark$$

$$-\frac{1}{p} x^2 + 2x + 4 \Big|_{x=0} x^2 \rightarrow x^2 - \varepsilon x - 1 \Big|_{x=0} -v \rightarrow x^2 - \varepsilon x - b \Big|_{x=0} \rightarrow (x-b)(x+1) \Big|_{x=0} < 0$$

$$\frac{-1}{+p} + \frac{b}{-p} \rightarrow (a \circ b) = (-1 \circ b) \rightarrow b - \varepsilon - 1 = -\varepsilon \checkmark$$

$$f(x) = x^3 - 3x^2 - x + 3 \xrightarrow{\text{مجموع ضرایب}} (x-1)(x^2 - 2x - 3) = \frac{(x-1)(x-3)(x+1)}{1 \quad 1 \quad -1}$$

$$-\frac{1}{p} + \frac{b}{-p} + \frac{c}{+p} \xrightarrow{x \geq 0} (a \circ b) = (1 \circ 3) \rightarrow x=2 \rightarrow (2-1)(1-2)(2+1) = -2 \checkmark$$

مجموع ضرایب x^3 و x^0 را در نظر بگیر

$$y = (a-1)x^2 + (a-1)x + 1 < 0 \rightarrow a-1 < 0 \rightarrow \textcircled{1} a \in \{1\} \textcircled{2} \rho = \frac{c}{a} = \frac{1}{a-1} < 0$$

$$\textcircled{3} \Delta < 0 \rightarrow a^2 + 1 - 2a - \varepsilon a + \varepsilon < 0 \rightarrow (a-1)(a-\varepsilon) < 0 \rightarrow \frac{1}{\varepsilon-1} < \frac{1}{\varepsilon} \textcircled{4} a \in (1, \varepsilon) \} \\ \textcircled{1} \cap \textcircled{2} \cap \textcircled{4} \rightarrow \emptyset \checkmark$$

$$\frac{m^k(m^k+1)}{m-k} \rightarrow \frac{m^k}{m-k} + \frac{m^k}{m-k} \rightarrow m > k \checkmark$$

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

$$[2, 3) \cup [n, \infty) \checkmark$$

$$f(x) = \frac{wx^2 - vx}{x^2 + \varepsilon} \rightarrow \frac{wx^2 - vx}{x^2 + \varepsilon} < 0 \rightarrow wx^2 - vx \Big|_{x=0} \rightarrow wx^2 - vx - 1 \Big|_{x=0} < 0$$

$$\frac{-v}{+a} - \frac{1}{+p} \rightarrow (a \circ b) = (-v \circ \varepsilon) \rightarrow b - a = \varepsilon - (-v) = \varepsilon + v \checkmark$$

$$-1 \Big|_{x=0} \left\{ \frac{wx^2 - \varepsilon x}{x+1} \right\} < 0 \rightarrow -1 \Big|_{x=0} \left\{ \frac{wx^2 - \varepsilon x}{x+1} \right\} < 0 \rightarrow \left\{ \frac{wx^2 - \varepsilon x + x + 1}{x+1} \right\} < 0 \rightarrow \left\{ \frac{wx^2 - vx + 1}{x+1} \right\} < 0$$

$$\frac{-1}{-1} + \frac{1}{+p} \rightarrow \textcircled{1} x > -1 \Big|_{x=0} \left\{ \frac{wx^2 - \varepsilon x}{x+1} \right\} < 0 \rightarrow \frac{x(wx - \varepsilon)}{x+1} < 0 \rightarrow x \in (-\infty, -1) \cup (\frac{\varepsilon}{w}, \infty)$$

$$\textcircled{1} \cap \textcircled{2} \rightarrow (0, \frac{\varepsilon}{w}) \checkmark$$

$$\frac{x^2 - 10}{x} \geq 0 \rightarrow \frac{x^2 - 10}{x} - 0 = \frac{x^2 - 10 - 0x}{x} \geq 0$$

$$\frac{(x+0)(x-0)}{x} \geq 0$$

$$\frac{-0 \quad + \quad 0 \quad - \quad 0}{-r \quad 0 \quad r}$$

$$x \in (-\infty, -r] \cup [0, r)$$

$$\checkmark (0, 0]$$

(1)