

هم رفته A

$1 \cup \omega$

حلنا عامی

باستناد تکلیف شماره ۲۴

$a^2 - a + b = (n-1)(n-3) = a^2 - a + 3 \Rightarrow a = 4, b = 3 \rightarrow a+b=7$

$n - 3n = n + 1 \rightarrow n = \frac{-1}{4}$ $n = 4: (k-2)n + (m-1) = 0 \rightarrow k - 1 + m - 1 = 0$
 $m = 9 - k \rightarrow k + m = 9$

$\frac{n}{p} \mid \begin{matrix} -1 & 4 \\ + & - \end{matrix} \rightarrow \frac{ak + m}{k + k} \parallel 9 \Rightarrow k < 2 \xrightarrow{k=1} k=1, m=8$
 $\Rightarrow \frac{1}{-1} = -1 + 1 = -1$

$-\frac{1}{2}a^2 + 2a + 4 > \frac{4}{2} = a^2 + 4a + 4 \Rightarrow a = \frac{4 \pm \sqrt{16}}{2} \rightarrow -1$

$a = -1, b = 8 \Rightarrow b - a = 8 - (-1) = 9$



$$f(x) = (x^3 - 3x^2 - x + 3) \rightarrow x^2(x-3) - (x-3) = (x-3)(x^2-1)$$

$$= \underbrace{(x-3)}_{\mu} \underbrace{(x-1)}_{\nu} \underbrace{(x+1)}_{-\lambda}$$

$$\begin{array}{c} -1 & 1 & \mu \\ -\phi & +\phi & -\beta & + \end{array} \quad (a, b) = (1, 3) \rightarrow \text{مستقيم}$$

$$f(x) = x - 1x - x + 3 = -3$$

$$a-1 < 0 \rightarrow a < 1 \quad \Delta < 0 \rightarrow \underbrace{(a-1)}_{\nu} \underbrace{(a-d)}_{\omega} < 0$$

$$\begin{array}{c} d \\ +\phi & -\phi & + \end{array}$$

$\Rightarrow 1 < a < d \rightarrow a < 1 \cap 1 < a < d = \emptyset$ - اذا لم يتقاطع مستقيمي a و b فليسوا

$$\frac{m(m^2+m)}{m-2} > 0 \quad m-2 \neq 0 \quad m \neq 2 \quad m(m^2+m) = 0 \rightarrow m = 0$$

$$m^2+m = 0 \rightarrow m(m^2+1) = 0$$

$$\leftarrow m = 0 \quad \checkmark \quad \rightarrow m^2 = -1 \times$$

$$\begin{array}{c} 0 & 2 \\ -\phi & -\phi & + \end{array}$$

$$(-\infty, 0] \cup [2, +\infty)$$

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

$$\frac{(x^2-x-4)(x-1)^2}{(x^2+x+1)(x-2)^2} < 0$$

$$x^2-x-4=0 \quad (x+2)(x-4) = 0$$

$$x-1=0 \quad x=1$$

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

$$\begin{array}{c} -2 & 1 & 2 & 4 \\ -\phi & +\phi & +\phi & -\phi & + \end{array} \rightarrow (-\infty, -1) \cup [2, 4]$$

$$\begin{array}{c} -2 & 1 & 2 & 4 \\ +\phi & -\phi & -\phi & +\phi & - \end{array}$$

$$\frac{(x^2-2x-1) - x(x^2+4)}{x^2+4} < 0 \quad \frac{x^2-2x-1 - x^3-4x}{x^2+4} < 0 \quad \frac{x^2-2x-1}{x^2+4} < 0$$

$$\Rightarrow x^2-2x-1 < 0 \quad (x-1)(x+1) < 0$$

$$\begin{array}{c} -2 & 4 \\ +\phi & -\phi & + \end{array} \rightarrow (-2, 4) \rightarrow b-a = 4 - (-2) = 6$$

تجزئة مستقيم $\rightarrow x^2-2x-1 = x(x-2) - 1$

مخرج $\rightarrow x \neq -1$

$$\begin{array}{c} - & 2 \\ +\phi & -\phi & + \end{array} \rightarrow x \in (1, 2) \cup (2, 4)$$

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

$$\begin{array}{c} -2 & d \\ -\phi & +\phi & + \end{array}$$

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$$\Rightarrow x \in (-\infty, 2] \cup [0, d]$$