

تکلیف ششما

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$$1) \text{ الف) } y = \frac{x+k}{kx^k + kx^k - 1x + k} \Rightarrow kx^k + kx^k - 1x + k = (x-1)(kx^k + \frac{1}{p}x - k) \quad 1$$

$$\frac{x+k}{(x-1)(kx^k + \frac{1}{p}x - k)}$$

$$D_f = \mathbb{R} - \left\{ -k, \frac{1}{p}, 1 \right\}$$

$$2) \text{ الف) } \frac{x+k}{kx^k + 9x^k + 1 \cdot x + k} \Rightarrow kx^k + 9x^k + 1 \cdot x + k = (x+1)(kx^k + 7x + k)$$

$$D_f = \mathbb{R} - \left\{ -k, -\frac{1}{p}, 1 \right\}$$

$$3) \text{ الف) } \frac{x+k}{x^k - kx^k + kx - 1} = y \rightarrow x^k - kx^k + kx - 1 = (x-1)(x^k - x + 1) \Delta = b^p - kac = \dots$$

$$D_f = \mathbb{R} - \{1\}$$

$$4) \text{ الف) } \frac{x+k}{x^k - kx^k + kx - 1} \geq 0 \rightarrow \frac{-k+1}{+ \phi - \phi +} \quad D_f = (-\infty, -k] \cup (1, +\infty)$$

$$5) \text{ الف) } |kx+1| - |x+k| \neq 0 \rightarrow kx^k + kx+1 + x^k + 9 + 9x - k(kx^k + 9x + x+k) \neq \dots$$

$$x^k - kx + k \neq 0 \rightarrow (x-k)^k \neq 0 \rightarrow x \neq k$$

$$6) \text{ الف) } kx^k + 1 \cdot x + 1 + kx^k + 7x + 9 + 7x \neq 0 \rightarrow 9x^k + kx + 19 \neq 0 \rightarrow (kx+k)^p \neq 0$$

$$\mathbb{R} - \left\{ k, -\frac{k}{p} \right\} = D_f$$

$$7) \text{ الف) } |kx+1| - |x+k| \geq 0 \rightarrow \frac{-\frac{k}{p}}{+ \phi - \phi +} \quad D_f = (-\infty, -\frac{k}{p}] \cup [k, +\infty)$$

$$8) \text{ الف) } 1 - \log^x k > 0 \rightarrow \log^x k < 1 \rightarrow x < k \quad D_f = (0, k)$$

s.a.m

$$ب) x > 0 \rightarrow 1 - \log \frac{x}{p} > 0 \rightarrow \log \frac{x}{p} < 1 \rightarrow x > \frac{1}{p} \quad D_f = (\frac{1}{p}, +\infty)$$

$$x^p - \omega |x-1| - Px + \omega \neq 0 \rightarrow x^p - \omega x + \omega - Px + \omega \neq 0 \rightarrow x^p - \omega x + 1 \neq 0 \quad 3$$

$$x=1 \rightarrow x^p - Px + \omega \neq 0 \rightarrow \Delta < 0 \rightarrow \text{میشمیت} \quad (x-\omega)(x-p) \neq 0$$

$$x < 1 \rightarrow x^p + \omega x - \omega - Px + \omega \neq 0 \rightarrow x^p + \omega x \neq 0$$

$$D_f = \mathbb{R} - \{0, -p, p, \omega\}$$

$$Px-1 > 0 \rightarrow Px > 1 \rightarrow x > \frac{1}{p} \quad \log \frac{(Px-1)}{\omega} > 0 \rightarrow Px-1 > 1 \rightarrow Px > P \rightarrow x > 1$$

$$\log \frac{(Px-1)}{\omega} > 0 \rightarrow \log \frac{Px-1}{\omega} \leq 1 \rightarrow Px-1 \leq \omega \rightarrow Px \leq \omega + 1 \rightarrow x \leq \frac{\omega+1}{p}$$

$$D_f = (1, \frac{\omega+1}{p}]$$

$$الف) P \cos x + 1 > 0 \rightarrow P \cos x > -1 \rightarrow \cos x > -\frac{1}{p}$$

$$D_f = (P \cos \pi - \frac{P\pi}{p}, P \cos \pi + \frac{P\pi}{p})$$

$$ب) \frac{x-1}{x+1} > 0 \rightarrow \frac{-1}{+\frac{1}{p} - \phi +}$$

$$\log \frac{x-1}{x+1} > 0 \rightarrow \frac{x-1}{x+1} > 1 \rightarrow \frac{x-1-x-1}{x+1} > 0 \rightarrow$$

$$D_f = (-\infty, -1)$$

$$\frac{-p}{x+1} > 0 \rightarrow \frac{-1}{+\frac{1}{p} -}$$

$$(a+p)x^p + ax + b \rightarrow$$

$$a=-p \rightarrow \sqrt{-Px+b} \rightarrow -Px+b > 0 \rightarrow -Px > -b \rightarrow x < \frac{b}{p} \rightarrow \frac{b}{p} = \mu \rightarrow \boxed{b=\phi}$$

$$\underbrace{x^p + px + p - m^p}_{\text{همیشه مثبت}} \gg 0 \rightarrow \Delta \ll 0 \rightarrow b^p - fac \rightarrow k - k(p - m^p) \ll 0 \rightarrow \quad .9$$

$$k \wedge + km^p = km^p - k \ll 0 \rightarrow k(m^p - 1) \ll 0$$

$$\text{اختلاف} \rightarrow 1 - (-1) = 2$$

$$\begin{array}{c} -1 \quad 1 \\ + \quad - \quad + \\ + \quad - \quad + \end{array}$$

$$k - x^p \gg 0 \rightarrow \frac{-p \quad p}{- \quad + \quad -} \quad [x] + [-x] + 1 \neq 0 \rightarrow \underbrace{[x] + [-x]}_{\text{منفر}} \neq -1 \rightarrow \checkmark .10$$

$$\text{منفر همیشه} \rightarrow D_f = [-2, 2] \rightarrow \underbrace{-2, -1, \dots, 1, 2}_{\text{معدول}}$$

$$[x] + [-x] = -1 \rightarrow \times \quad x \notin x$$