

Subject:

Year.

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تلف صوتی، آنتن، ماسی، بازده مضرب (C): ۲. آنتن های نوستر

①

الف) $\begin{cases} x \neq 0 \\ x \neq 1 \end{cases}$ $\frac{x-1}{x} - \frac{x}{x-1} \geq 0$

$\hookrightarrow \frac{x^2+1-2x-x^2}{-x(x-1)} \geq 0$

$\frac{1}{x-1}$

$\frac{+}{-} \frac{-}{+} \frac{+}{-}$

$D_f = (-\infty, 0) \cup [\frac{1}{p}, 1)$

ب) $\begin{cases} x \neq -1 \\ x \neq 1 \end{cases}$ $\frac{x}{x-1} + \frac{1}{x+p} = 0 \rightarrow \frac{x}{x-1} \leq \frac{-1}{x+p}$

$px = -\omega \rightarrow x = -\frac{\omega}{p}$

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

②

الف) $\left(\left(\frac{1}{p} \right)^x - 1 \right) (1-p-1^x) \geq 0$

$x = -p$

$\hookrightarrow x \leq \frac{\omega}{p}$

$\frac{-p}{\frac{\omega}{p}}$

$\frac{+}{-} \frac{-}{+}$

$D_f = (-\infty, -p] \cup [p, \omega + \infty)$

ب) $D_f \subset [1, 1+p]$

③

$x^p - x - p > 0 \rightarrow (x-p)(x+1) > 0$

$x^p - 1 > 0$

$x^p \geq 1 \rightarrow x \geq 1$

$\hookrightarrow x \geq 1$

$\frac{-1}{p}$

$\frac{+}{-} \frac{-}{+}$

$D_f = (-\infty, -1) \cup (p, +\infty)$

④ ①

$1+a-x-x^p \geq 0$

$(\frac{1}{p})^x \leq -p$

$a+b = 1, a-x-x^p = 1$

$1-p-a-x = 0$

$-pa=1 \rightarrow a = -\frac{1}{p}$

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

$\hookrightarrow b = \frac{1}{p}$

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$$f(x) - x \geq 0 \rightarrow f(x) \geq x$$

$$\text{if } x \geq 1 \rightarrow x^p - x \geq x \rightarrow x^p \geq 2x \rightarrow x \geq 1$$

$$\text{if } x < 1 \rightarrow x^p + x \geq x \rightarrow x \geq -x^p$$

$$O_p \in [-x^p, 1) \cup [1, +\infty) \subseteq [-x^p, +\infty)$$

$$f\left(\sin \frac{\pi}{p} + \cos p \pi\right) = p(x^p - px)$$

$$\frac{\sqrt{p}}{p}$$

1

$$\hookrightarrow p([x - 1]^p - 1) \rightarrow px \frac{1}{p} = \left(\frac{1}{p}\right)$$

$$\left(\frac{\sqrt{p}}{p}\right)^p \rightarrow \frac{p}{2}$$

$$f\left(\frac{a+1}{a-1}\right) = a \rightarrow$$

$$\frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} = \frac{\frac{2a}{a-1}}{\frac{2}{a-1}} = a$$

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

$$f(\sqrt{a^p - 1}) = a^p - 1 - f\sqrt{a^p - 1} = -f$$

$$t^p - \Sigma t + \Sigma = -$$

$$t = p \rightarrow \sqrt{a^p - 1} = p \rightarrow a^p = \omega$$

$$a = \pm \sqrt{\omega}$$

$$f(x+p) = (x-p)(x-p)$$

$$f(-p) = -1 \times -9 = 9p$$

$$f(p) = -1 \times -p = p$$

$$9p \times p = 18p^2$$

(10) (11)

$$f \cos^p + \omega \cos - p, \omega = 0$$

$$\cos^p + \omega \cos - 1K = -$$

$$(\cos_n + v) (\cos_n - v) = -$$

$$\tan^p \frac{\pi}{p} = \left(\frac{p}{p}\right)$$

$$\cos^p \sim \cos^p \frac{p}{p} \quad \cos^p \frac{p}{p} \leq \frac{1}{p} \rightarrow x = \frac{\pi}{p}$$

HIRAD