

$x=1 \rightarrow \text{مقدار } x \text{ را در } a \text{ قرار دهیم}$

$a = 4a - 12 \rightarrow 3a = 12$

$a = 4$

$(a-1)(x)^2 + 12a + b = 0 \rightarrow 3\left(\frac{12}{3} - 1\right) + \frac{12 \cdot 4}{3} + b = 0$

$-\frac{12}{3} + \frac{12 \cdot 4}{3} + b = 0 \rightarrow b = -12$

مقدار b را

$x^2 + 12x + 12 - 4x^2 \geq 0 \rightarrow \Delta \leq 0 \rightarrow 12 - 4(12 - 4) \leq 0$

$12 \leq 4 \rightarrow \text{مقدار } x \text{ را در } 12 \rightarrow 1 - (-1) = 2$

$f(x) = \frac{\sqrt{12 - x^2}}{[x][x] + 1} \rightarrow 0 \rightarrow -12 \leq x \leq 12$

$[x] + [-x] = 0$
 $[x] + [-x] = -1$
 $\rightarrow [-12, 12]$

$x(x+12) \rightarrow \frac{-12}{+} \frac{0}{+} \rightarrow [-12, 0] \cup [0, 12]$
 $[-12, 12]$

$$\left. \begin{aligned} x^p - 1 &= (x-1)(x+1) \\ x^{p-1}x^p &= x^p(x-1) \\ x^{p-1} &= (x-1)(x^p + x + 1) \end{aligned} \right\} \rightarrow \frac{x^p(x-1)(x+1)(x^p+1)}{(x-1)(x^p+x+1)}$$

$$Df = (-\infty, -1] \cup \{0\} \cup [p+1, \infty)$$

ف) $y = \sqrt{|x-1|-p} \geq 0 \rightarrow x-1 \geq p, \mu \rightarrow x-1 \geq p$
 $\downarrow \quad \downarrow$
 $x \geq 1+p \quad x \geq -1$
 $Df = (-\infty, -1] \cup [p+1, \infty)$

ج) $|x-1| \geq p \rightarrow Df = \mathbb{R} \rightarrow$ ~~مجموعه تمام اعداد حقیقی~~
 $|x-1| \geq \epsilon \rightarrow x-1 \leq -\epsilon \text{ or } x-1 \geq \epsilon$
 $-4 \leq x-1 \leq 4 \rightarrow -3 \leq x \leq 5 \rightarrow Df = [-3, 5]$

د) $y = \sqrt{1-x|x|} \geq 0 \rightarrow x|x| \leq 1 \rightarrow x \leq 0$

$$|x| = -x \rightarrow 1 - x(-x) = 1 + x^2 \rightarrow x \leq 0$$

$$|x| = x \rightarrow 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow x \leq 0$$

$$Df = (-\infty, 1]$$

ب) $|x-a| \geq p \rightarrow |x-a| \leq p$

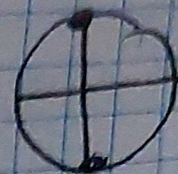
$$p \leq x \leq 1 \rightarrow \sqrt{p-|x-a|} = 1 \rightarrow p-|x-a| = 1 \rightarrow |x-a| = p-1$$

$$\sqrt{p-|x-a|} = 1 \rightarrow p-|x-a| = 1 \rightarrow |x-a| = p-1$$

$$x = p, x = 1 \quad Df = [p, p] \cup (p, p) \cup (p, 1]$$

الف) $\rightarrow \sin^p x - 1$

$\cos x \rightarrow \cos x \neq 0 \rightarrow$



(✓)

$Df = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$

ب) $\frac{\cos x}{\sqrt{\cos x - 1}}$

$\sqrt{\cos x - 1} \rightarrow \cos x \neq \frac{1}{2}$



$Df = \mathbb{R} - \left\{ k\pi \pm \frac{\pi}{3} \right\}$

ج) $y = \frac{x+p}{|px+1| - |x+p|} \neq 0$

$|px+1| \neq |x+p|$

$(px+1)^p \neq (x+p)^p \rightarrow \varepsilon x^p + \varepsilon x + 1 \neq x^p + px + p$

$px^p - px - 1 \neq 0 \rightarrow x^p - px - 1 \neq 0 \rightarrow x \neq \frac{p}{\varepsilon}$

$Df = \mathbb{R} - \left\{ p - \frac{p}{\varepsilon} \right\}$

د) $|px+1| > |x+p| \Leftrightarrow |px+1| > |x+p|$

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

$Df = \left(-\infty, -\frac{\varepsilon}{p} \right) \cup \left(p+\varepsilon, \infty \right)$

$$x-1 > 0 \rightarrow x > 1$$

و

$$x-1 > 1 \rightarrow x > 2$$

$$x-1 < 0 \rightarrow x < 1$$

$$x-1 < 1 \rightarrow x < 2$$

$$Df = [1, 2]$$

$$x \cos x + 1 > 0$$

الف)

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

$$Df = (x \cos x + \frac{1}{x})$$



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

$$\frac{x-1}{x+1} + \frac{x-1}{x+1} = \frac{-4}{x+1}$$

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

$$a-x=0$$

$$a=x$$

$$\rightarrow ax+b \rightarrow x=k \rightarrow a+b=c$$

$$a=-b \rightarrow x(k) = -b \rightarrow \underline{b=-4}$$