

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره کلاس یازدهم سر A

۱۳۷۵

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

$$\frac{1}{x} - \frac{1}{x-1} \rightarrow D_f = (-\infty, 0) \cup [\frac{1}{2}, 1)$$

تقریبی های مخرج ها نباید در دامنه باشند! $x+1 \neq 0 \rightarrow x \neq -1$ $x \neq 0$ $x-1 \neq 0 \rightarrow x \neq 1$

$$x+2 \neq 0 \rightarrow x \neq -2 \quad \frac{x}{x-1} + \frac{1}{x+2} \neq 0 \rightarrow \frac{x^2 + x + 2}{(x-1)(x+2)} \neq 0 \rightarrow x \neq -\frac{5}{2}$$

$$D_f = \mathbb{R} - \{-1, 0, 1, -2, -\frac{5}{2}\}$$

$$(2-1) ((\frac{1}{x})^n - 9)(32 - x^n) \geq 0 \rightarrow D_f = (-\infty, -2] \cup [\frac{5}{2}, +\infty)$$

$$(\frac{1}{x})^n = 9 \rightarrow x = -2 \quad 32 = x^n \rightarrow x = \frac{5}{2}$$

$$x^2 - x - 2 > 0 \rightarrow 1 + 1 = 9 \rightarrow \frac{1 \pm 3}{2} = (2, -1)$$

$$\frac{-1 \pm \sqrt{1+4}}{2}$$

خارج نشمارد چون رادیکال همواره مثبت است

$$\mathbb{R} - [-1, 2]$$

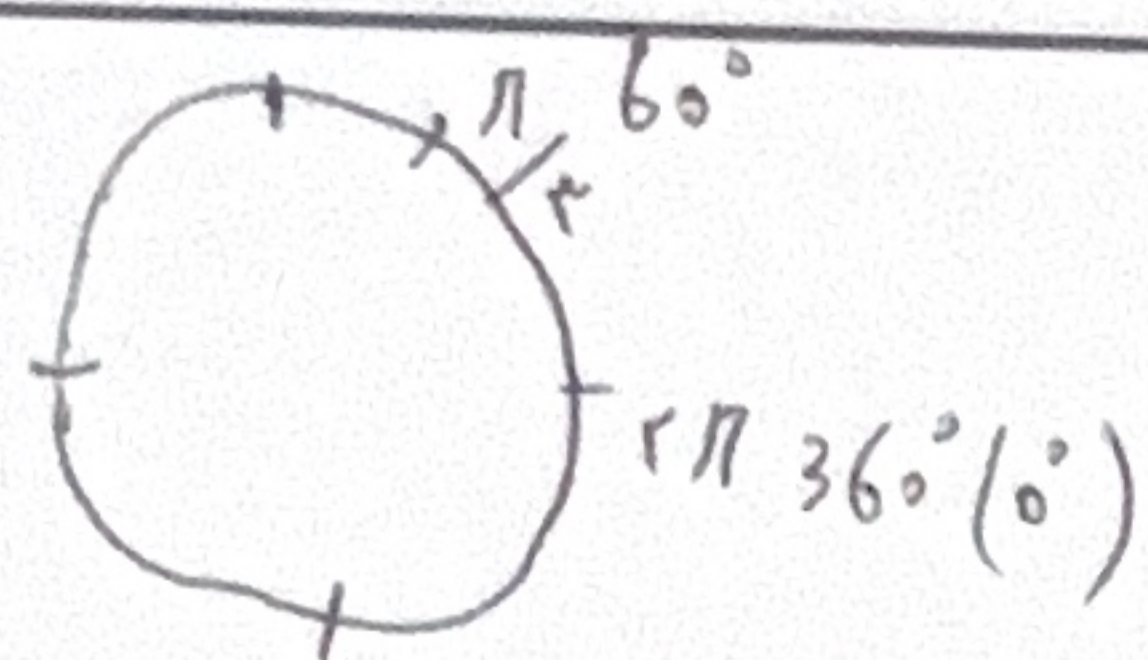
$$\sqrt{-x^2 + ax + 2} \rightarrow -x^2 + ax + 2 > 0 \rightarrow \frac{-a \pm \sqrt{a^2 + 16}}{-2} = \frac{1 \pm \sqrt{17+16}}{-2} = \frac{1 \pm 5}{-2} = -2, 3$$

$$\frac{\sqrt{a^2 + 16} - a}{-2} = -2 \rightarrow \sqrt{a^2 + 16} - a = 4 \rightarrow a^2 + 16 = 16 + a^2 + 8a \rightarrow -8 = 8a \rightarrow a = -1$$

$$\omega = \tan r$$

$$\rho s = \frac{r}{\omega}$$

$$\tan \frac{r}{\omega} = \mu$$



$$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$$

$$\cos(\pi) = -1$$

$$2\left(\frac{3+4+5\sqrt{3}}{2}\right) - 2\sqrt{3} - 4 = \frac{11}{2} + 2\sqrt{3} - 2\sqrt{3} - 4$$

$$\frac{\sqrt{3}+2}{2}$$

$$f(x) = 2x^2 + (-4x) \rightarrow 2\left(\frac{\sqrt{3}+2}{2}\right)^2 - 4\left(\frac{\sqrt{3}+2}{2}\right) = -\frac{3}{2} = -\frac{1}{2}$$

1/5

از اعداد طبیعی یک رقمی یعنی $\{-2, -1, 0, 1, 2\}$ $f(f(1)) \neq 1$ (X)

$$f(f(0)) = 0$$

$$f(f(-1)) = -1$$

$$f(f(1)) = 1$$

$$f(f(-2)) = -2$$

در بین کد زیر شش همی اعداد صحیحی. بنده 1 را می تواند باشد

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

$$a \neq 1$$

$$\frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} = a \quad a \in \mathbb{R} - \{1\}$$

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

$$\sqrt{x^2-1} = 2 \rightarrow x = \pm\sqrt{5}$$

$$a = \pm\sqrt{5}$$

$$x^2 - 2x + 4 \rightarrow 1 - 2 + 4 = 3 \rightarrow f(1+2) = f(3) = 3$$

$$f(-4+2) = f(-2) \rightarrow 2y + 20 + 4 = 22 \rightarrow x = 144$$

$$f \cos x + 2 \cos x = 3, a=0$$

$$2a + 14 \times \frac{1}{f} = 11 \rightarrow \frac{-a \pm 9}{1} = \frac{1}{f} \rightarrow \cos \frac{\pi}{3} = \frac{1}{f} \rightarrow \tan \frac{\pi}{3} = \sqrt{3}$$

ب-۲) $\sqrt{x-1} + \sqrt{y+1} = 3$, $\sqrt{y+1} = 3 - \sqrt{x-1} \rightarrow 3 - \sqrt{x-1} \geq 0 \rightarrow \sqrt{x-1} \leq 3 \rightarrow x \leq 10$ I

$\downarrow$
 $x-1 \geq 0 \rightarrow x \geq 1$ I

I, II $\rightarrow 1 \leq x \leq 10 \rightarrow Df = [1, 10]$

$f(x) = x^2 - 2x = x^2 - 2x + 1 - 1 = (x^2 - 2x + 1) - 1 = (x-1)^2 - 1$ -4

$\sin \frac{\pi}{6} + C \cdot \sin \pi = \sqrt{\frac{c}{r}} + 1 \rightarrow f(\sqrt{\frac{c}{r}} + 1) = (\sqrt{\frac{c}{r}} + 1 - 1)^2 - 1 = (\frac{r}{c}) - 1 = -\frac{1}{r}$

$f(x) - x = \begin{cases} x^2 - 2 - x & x \geq 1 \\ x^2 + 3 - x & x < 1 \end{cases} = \begin{cases} x^2 - 2 & x \geq 1 \\ x + 3 & x < 1 \end{cases}$ -5

$f(x) - x \geq 0 \rightarrow \begin{cases} x^2 - 2 \geq 0 \rightarrow x \geq 1 \checkmark \\ x + 3 \geq 0 \xrightarrow{x < 1} -3 \leq x < 1 \checkmark \end{cases}$

$\rightarrow Df = [-3, +\infty)$

باید به پس نیز مشخص است!

