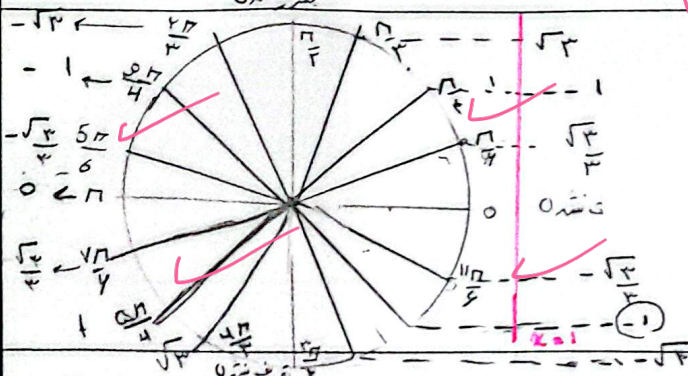


نام و نام خانوادگی: پروردگار پاسخنامه تشریحی تکلیف شماره ۱ کلاس: یازدهم ریاضی A

۱۹۷۵ آفرین



الف) $\sin \frac{\pi}{4} + \cos \pi + 2 \tan \frac{3\pi}{4} = \frac{1}{2} + (-1) + 2(-1) = -\frac{3}{2}$

ب) $-\cos \frac{5\pi}{4} + \sin \frac{\pi}{4} - 2 \sin \frac{\pi}{4} = -(-\frac{\sqrt{2}}{2}) + (\frac{\sqrt{2}}{2}) - 2(\frac{\sqrt{2}}{2}) = -\frac{\sqrt{2}}{2}$

ج) $\cot \frac{\pi}{4} + 2 \cot \frac{\pi}{4} - 2 \tan \frac{\pi}{4} = -\frac{\sqrt{2}}{2} + 2(\frac{\sqrt{2}}{2}) - 2(\frac{\sqrt{2}}{2}) = -\frac{\sqrt{2}}{2}$

د) $(\cos(\sin \pi) + \sin(\pi \cos \frac{\pi}{4})) = (\cos(0) + \sin(\frac{\pi}{2})) = 1 + 1 = 2$

$f(a) = a^2 + 2a$

$f(a) = 2a + a + 2 = 3a + 2 \Rightarrow a^2 + 2a = 3a + 2$

$a^2 + a - 2 = 0 \Rightarrow a = 1$
 $a = -2 \Rightarrow f(1) = 1 + 2 = 3$

$|x+1| \geq 2 \Rightarrow x \geq 1 \text{ یا } x \leq -3$

$\Rightarrow a+b = 24$

$x = -\frac{a}{b} \Rightarrow a-b = a+(-1)$

$f(x) = \begin{cases} 2x^2 - b \\ a + 2x \end{cases}$

$|x+1| \geq 2$
 $x+1 \geq 2$
 $x \geq 1$

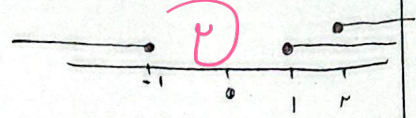
$-1 \leq x \leq -3$
 $x \leq -3$

الف) $x^2 - 2x + 0 = 0 \Rightarrow x^2(x-2) = 0 \Rightarrow x = 2, 0 \Rightarrow D_f = \mathbb{R} - \{0, 2\}$

ب) $2x^2 + 2x - 1x + 1 = 0 \Rightarrow 2x^2 + x + 1 = 0 \Rightarrow 2x(x+1) + 1(x+1) = 0$

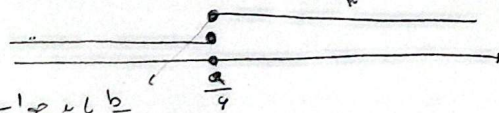
$(x^2+1)(2x+1) \neq 0 \Rightarrow \begin{cases} x^2+1=0 \Rightarrow \text{no real solution} \\ 2x+1=0 \Rightarrow x=-\frac{1}{2} \end{cases} \Rightarrow x \in \mathbb{R} - \{-\frac{1}{2}\}$

الف) $x^2 - 1 \geq 0 \Rightarrow x \geq 1$ or $x \leq -1$ (1) $x - 2 \geq 0 \Rightarrow x \geq 2$ $D_F = [2, \infty)$



ب) $4 - 2x \geq 0 \Rightarrow x \leq 2$
 $4x - 2 > 0 \Rightarrow x > \frac{1}{2}$
 $D_F = (\frac{1}{2}, 2]$

الف) $4x - 2 \geq 0 \Rightarrow x \geq \frac{1}{2}$ $b - 2x \geq 0 \Rightarrow x \leq \frac{b}{2}$ $\frac{a}{4} - \frac{b}{2} = 2 \Rightarrow a = 12, b = 4, \frac{b}{a} = \frac{1}{3}$



ب) $\frac{b}{2} \leq x \leq \frac{a}{4}$ (if $\frac{b}{2} \leq \frac{a}{4}$)
 -1 - $\frac{b}{2} \leq \frac{a}{4}$ (if $\frac{b}{2} > \frac{a}{4}$)
 $\frac{1}{4} \leq \frac{b}{2}$ (if $\frac{b}{2} > \frac{a}{4}$)

(2)

الف) $(x-3)(x+2) - 2,2 = 0 \Rightarrow (x^2 - 4)(x-3) = 0 \Rightarrow x = 3, 2, -2$

x	-3	-2	2	3
$n(x)$	+	-	-	+
	0	0	0	0

پاسن صفحه امثالین

$D_F = (-\infty, -3) \cup (2, \infty)$
 $D_F = (-\infty, -3) \cup (2, 3) \cup (3, \infty)$

(1, 1, 1, 1)

ب) صورت $(x-1)(x^2 + ax - 4)$
 $x^2 - x^2 = -2x^2 \Rightarrow a = -1$
 $-ax - 4x = -5x \Rightarrow a = 5$
 $D_F = (-\infty, -1) \cup (5, \infty)$

الف) $2[x] - 2 \geq 0 \Rightarrow [x] \geq 1 \Rightarrow x \in [1, \infty)$

(2)

ب) $2[x] - 5 \geq 0 \Rightarrow [x] \geq \frac{5}{2} \Rightarrow x \in [\frac{5}{2}, \infty)$

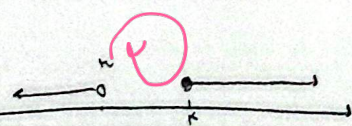
الف) $|x-3| \neq 0 \Rightarrow x \neq 3$
 $x+1 \geq 0 \Rightarrow x \geq -1$

$4-x \geq 0 \Rightarrow x \leq 4$
 $\Delta < 0 \Rightarrow$ حصاره نیست

$4 \geq x \Rightarrow -1 \leq x \leq 4 - \{3\}$
 $= x \in [-1, 3) \cup (3, 4]$

ب) $[x] - 2 \geq 0 \Rightarrow [x] \geq 2 \Rightarrow x \in [2, \infty)$

$2 - [x] \geq 0 \Rightarrow [x] \leq 2 \Rightarrow x \in (-\infty, 3)$



الف-٨) $y = \sqrt{\frac{n^2 - n - 4}{n^4 - 13n^2 + 34}} \leadsto \frac{n^2 - n - 4}{n^4 - 13n^2 + 34} \geq 0 \leadsto \frac{(n-3)(n+2)}{(n^2-9)(n^2-4)} \geq 0$

$\frac{(n-3)(n+2)}{(n-3)(n+3)(n-2)(n+2)} \geq 0 \leadsto$

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

$D_f = (-\infty, -3) \cup (2, 3) \cup (3, +\infty)$