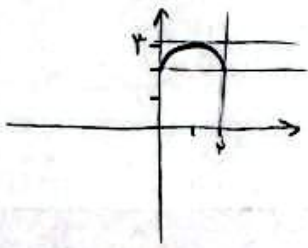


کلاس: دستان c

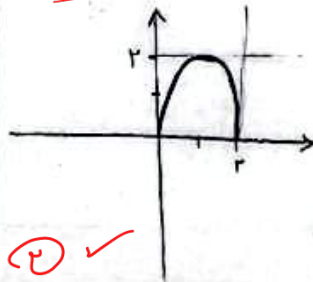
با استفاده از روشی که طلب شده است: 0

نام و نام خانوادگی: زرنیا انصاری

الف)

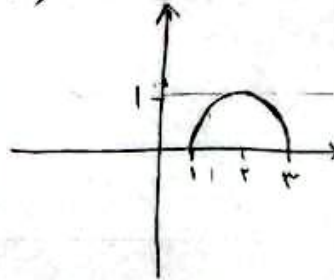


ب) 19, 76

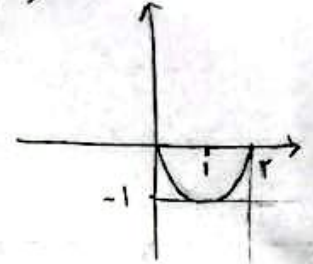


✓

ج)



د)



الف) $(x-1)(x-2) > 0 \rightarrow$

x	1	2
+	-	+

$D_f = (-\infty, 1) \cup (2, +\infty)$

ج) $(n+1)(n+5) > 0$

n	-5	-1
+	-	+

$D_f = (-\infty, -5] \cup [-1, +\infty)$

ب) $(n-1)(n-5) < 0$

n	1	5
+	-	+

$D_f = (1, 5)$

د) $(n-1)(n-4) < 0$

n	1	4
+	-	+

$D_f = [1, 4]$

الف) $\frac{(n-1)(n-2)}{(n-5)} < 0$

n	1	2	5
-	+	-	+

$D_f = (-\infty, 1) \cup (2, 5)$

ب) $\frac{n^2-1}{(n-1)(n-5)} \geq 0$

n	-1	1	5
+	-	+	-

$D_f = (-\infty, -1] \cup (5, +\infty)$

الف) $\frac{n^2-1}{n^2-n} \geq 0$

$\rightarrow n(n^2-1)$

ب) $\frac{n^2-14}{(n-1)(n-5)} \geq 0$

n	-5	1	7
+	-	+	+

$D_f = (-\infty, -5] \cup (1, 5) \cup (7, +\infty)$

n	-1	1	5
+	-	+	-

$D_f = (-\infty, -1) \cup (0, 1) \cup (1, +\infty)$

الف) $2-n > 0 \rightarrow n < 2$

$2-\sqrt{2-n} \geq 0 \rightarrow \sqrt{2-n} \leq 2 \rightarrow 2-n \leq 4 \rightarrow n \geq -2$

$D_f = [-2, 2]$

ب) $x-2 \geq 0$

$2-\sqrt{x-2} \geq 0 \rightarrow \sqrt{x-2} \leq 2 \rightarrow x-2 \leq 4 \rightarrow x \leq 6$

$D_f = [2, 6]$

$$\text{الف) } 4 - 2n^2 > 0 \rightarrow 2n^2 < 4 \rightarrow n^2 < 2 \rightarrow \sqrt{2} > |n| > -\sqrt{2} \rightarrow D_f = [-\sqrt{2}, \sqrt{2}]$$

$$\text{ب) } 2|n| - 9 > 0 \rightarrow 2|n| > 9 \rightarrow |n| > \frac{9}{2} \rightarrow \begin{cases} n > \frac{9}{2} \\ n < -\frac{9}{2} \end{cases} \quad \text{Ⓟ} \quad \checkmark$$

$$D_f = (-\infty, -\frac{9}{2}] \cup [\frac{9}{2}, +\infty)$$

$$\text{الف) } |n| - 3 \neq 0 \rightarrow |n| \neq 3 \rightarrow n \neq \pm 3$$

$$D_f = \mathbb{R} - \{\pm 3\}$$

Ⓟ ✓

$$\text{ب) } n > 0$$

$$\sqrt{n} - 3 \neq 0 \rightarrow \sqrt{n} \neq 3 \rightarrow n \neq 9$$

$$D_f = [0, +\infty) - \{9\}$$

$$\text{الف) } 2\cos n - 1 \neq 0 \rightarrow \cos n \neq \frac{1}{2}$$

$$D_f = \mathbb{R} - \{2k\pi - \frac{\pi}{3}, 2k\pi + \frac{\pi}{3}\}$$

1, v6

$$\text{ب) } \cos n \neq 0 \rightarrow \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$$

$$\sin n \neq 0 \rightarrow \mathbb{R} - \{k\pi\}$$

$$2\cos n - 1 \neq 0 \rightarrow \mathbb{R} - \{k\pi + \frac{\pi}{3}\}$$

$$D_f = \mathbb{R} - \{k\pi - \frac{\pi}{3}, k\pi + \frac{\pi}{3}\}$$

$$\text{ب) } 2\sin n + 1 \neq 0 \rightarrow \sin n \neq -\frac{1}{2}$$

$$D_f = \mathbb{R} - \{2k\pi - \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}\}$$

$$\text{ب) } 2\sin^2 n - 1 \neq 0 \rightarrow \sin n \neq \pm \frac{\sqrt{2}}{2}$$

$$D_f = \mathbb{R} - \{k\pi \pm \frac{\pi}{4}\}$$

$$y = \frac{1}{\sqrt{2|n-2|-\frac{1}{2}}} \Rightarrow 2|n-2| - \frac{1}{2} > 0$$

$$2|n-2| > \frac{1}{2} \rightarrow |n-2| > \frac{1}{4} \rightarrow \begin{cases} n-2 > \frac{1}{4} \rightarrow n > \frac{9}{4} \\ n-2 < -\frac{1}{4} \rightarrow n < \frac{7}{4} \end{cases}$$

$$D_f = (-\infty, \frac{7}{4}) \cup (\frac{9}{4}, +\infty)$$

Ⓟ ✓

$$\text{الف) } 4 - 2|n| > 0 \rightarrow 2|n| < 4 \rightarrow |n| < 2 \rightarrow -2 < n < 2$$

$$D_f = [-2, 2]$$

Ⓟ ✓

$$\text{ب) } \frac{\sqrt{|n|}}{\sqrt{|n|}} = \frac{|n| > 0}{|n| > 0} \rightarrow \begin{cases} n > 0 \\ n < 0 \end{cases}$$

$$D_f = \mathbb{R} - \{0\}$$