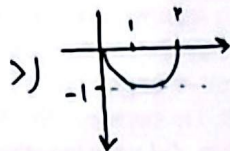
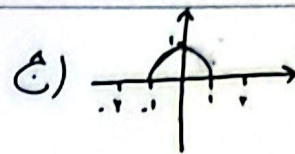
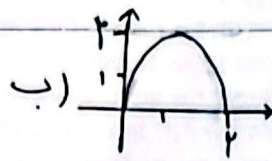
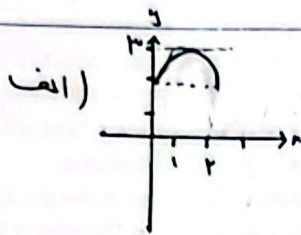


نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره: (۱۵) کلاس: دهم، فصل پنجم، تست ها



الف) $(x-2)(x-3) > 0$

$$\begin{array}{c} 2 \quad 3 \\ + \quad \phi \quad - \quad \phi \quad + \end{array}$$

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

ب) $(x-1)(x-5) < 0$

$$\begin{array}{c} 1 \quad 5 \\ + \quad \phi \quad - \quad \phi \quad + \end{array}$$

$(1, 5)$

ج) $(x+1)(x+5) > 0$

$$\begin{array}{c} -5 \quad -1 \\ + \quad \phi \quad - \quad \phi \quad + \end{array}$$

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

د) $(x-1)(x-4) \leq 0$

$$\begin{array}{c} 1 \quad 4 \\ + \quad \phi \quad - \quad \phi \quad + \end{array}$$

$[1, 4]$

الف) $\frac{(x-1)(x-2)}{(x-5)} < 0$

$$\begin{array}{c} 1 \quad 2 \quad 5 \\ - \quad \phi \quad + \quad \phi \quad - \quad \phi \quad + \end{array}$$

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

ب) $\frac{(x-1)(x+1)}{(x-1)(x-5)} > 0$

$$\begin{array}{c} -1 \quad 1^* \quad 5 \\ + \quad \phi \quad - \quad \phi \quad - \quad \phi \quad + \end{array}$$

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

الف) $\sqrt{\frac{(x-1)(x^2+x+1)}{x(x-1)(x+1)}} \rightarrow$ اتحاد میل و قیود
 $\frac{(x-1)(x^2+x+1)}{x(x-1)(x+1)} \rightarrow$ اتحاد مزدوج

$$\begin{array}{c} -1 \quad 0 \quad 1^* \\ + \quad \phi \quad - \quad \phi \quad + \quad \phi \quad + \end{array}$$

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

ب) $y = \sqrt{\frac{(x-4)(x+4)}{(x-1)(x-4)}} \rightarrow$ اتحاد مزدوج
 $\frac{(x-4)(x+4)}{(x-1)(x-4)} \rightarrow$ اتحاد جمله مشترک

$$\begin{array}{c} -4 \quad 1 \quad 4^* \\ + \quad \phi \quad - \quad \phi \quad + \quad \phi \quad + \end{array}$$

$D_f = (-\infty, -4) \cup (1, 4) \cup (4, +\infty)$

الف) $2-x \geq 0$ $(x \leq 2)$

$4-\sqrt{2-x} \geq 0$ $\sqrt{2-x} \leq 4$ $2-x \leq 14$

$x \geq -14$ $-14 \leq x \leq 2$

$D_f = [-14, 2]$

ب) $x-2 \geq 0$ $(x \geq 2)$

$3-\sqrt{x-2} \geq 0$ $\sqrt{x-2} \leq 3$ $x-2 \leq 9$

$x \leq 11$ $2 \leq x \leq 11$

$D_f = [2, 11]$

الف) $4 - 2u^2 > 0$ $2(2 - u^2) > 0$ $2 - u^2 > 0$ $u^2 < 2$ $u < \sqrt{2}$ $D_f = [\sqrt{2}, +\infty)$	ب) $3 x - 9 > 0$ $3 x > 9$ $x > 3$ $3 < x < -3$ $D_f = (-\infty, -3] \cup [3, +\infty)$	٤
الف) $y = \sqrt{\frac{3}{ x +1}}$ $\rightarrow$ مرفوع $y = \sqrt{ x -3}$ $x -3 \neq 0$ $x \neq 3$ $x \neq -3, 3$ $D_f = \mathbb{R} - \{-3, 3\}$	ب) $y = \sqrt[3]{\frac{\sqrt{x}+1}{\sqrt{x}-3}}$ $\rightarrow$ مرفوع $x > 0$ $\sqrt{x}-3 \neq 0$ $\sqrt{x} \neq 3$ $x \neq 9$ $D_f = \mathbb{W} - \{9\}$	٧
الف) $2\cos u - 1 \neq 0$ $2\cos u \neq 1$ $\cos u \neq \frac{1}{2}$ $u \neq 2k\pi \pm \frac{\pi}{3}$ $D_f = \mathbb{R} - \{2k\pi + \frac{\pi}{3}, 2k\pi - \frac{\pi}{3}\}$	ب) $2\sin u + 1 \neq 0$ $2\sin u \neq -1$ $\sin u \neq -\frac{1}{2}$ $u \neq \frac{7\pi}{6} + 2k\pi, \frac{11\pi}{6} + 2k\pi$ $D_f = \mathbb{R} - \{\frac{7\pi}{6} + 2k\pi, \frac{11\pi}{6} + 2k\pi\}$	٨

ادامہ سوال 1 :

$$\text{ج) } \tan n \rightarrow \cos n \neq 0$$

$$\cot n \rightarrow \sin n \neq 0$$

$$\cot n - 1 \neq 0 \quad \cot n \neq 1 \quad n \neq \frac{\pi}{r} + k\pi, \frac{k\pi}{r}$$

$$D_f = \mathbb{R} - \left\{ \frac{\pi}{r} + k\pi, \frac{k\pi}{r} \right\}$$

$$\text{>) } \sqrt{\sin n} - r \neq 0 \quad \sin n \neq \frac{r^2}{r} \quad \sin n \neq \pm \frac{r}{r}$$

$$D_f = \mathbb{R} - \left\{ \frac{\pi}{r} + \frac{k\pi}{r} \right\}$$

$$y = \frac{1}{\sqrt{2|x-2| - \frac{1}{p}}}$$

$$2|x-2| - \frac{1}{p} > 0$$

$$2|x-2| > \frac{1}{p}$$

$$|x-2| > \frac{1}{2p}$$

$$x \begin{cases} \nearrow x-2 > \frac{1}{2p} & x > \frac{4}{2p} \\ \searrow -x+2 > \frac{1}{2p} & x < \frac{4}{2p} \end{cases}$$

$$D_f = \left(\frac{4}{2p}, +\infty \right)$$

9

الف) $4-2|x| \geq 0$

$$2(2-|x|) \geq 0$$

$$2-|x| \geq 0$$

$$|x| \leq 2$$

$$-2 \leq x \leq 2$$

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

ب) $y = \sqrt{\frac{|x|}{|x|}}$

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

10