

نام و نام خانوادگی الفامهیل فیروز پاسخنامه تشریحی تکلیف شماره F کلاس ... بیازدهم دهنتم B ...

$$(a - 4) = 0$$

$$a = 4$$

$$f(x) = \sqrt{4x + b}$$

$$\xrightarrow{\text{سازش}} 4 + b = 0$$

$$b = -4$$

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$$a = 1$$

$$b = 4$$

$$c = 4m^2$$

$$\left. \begin{array}{l} a = 1 \\ b = 4 \\ c = 4m^2 \end{array} \right\} \rightarrow \Delta \leq 0 \rightarrow f - f(4 - m^2) \leq 0$$

$$f - 4 + 4m^2 \leq 0$$

$$4m^2 \leq 4$$

$$m^2 \leq 1$$

$$-1 \leq m \leq 1$$

$$\leadsto 1 - (-1) = 4$$

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$$f(x) = \frac{\sqrt{4 - x^2}}{[x] + [-x] + 1}$$

$$\bullet \quad x \in \mathbb{Z} \checkmark$$

$$-1 \quad x \notin \mathbb{Z} \xrightarrow{x} \bullet \text{زیادتر از ۱}$$

$$f - x^2 \gg 0$$

$$f \gg x^2$$

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

$$D_f = [-1, 1]$$

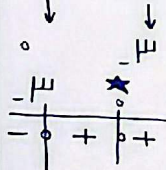
نادر

بج عدد
صحیح

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$$\text{الف) } \sqrt{x^3 + 3x^2}$$

$$x^2(x + 3) \geq 0$$



$$D_f = [-3, +\infty)$$

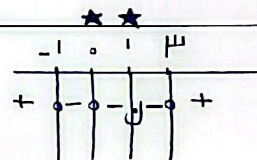
$$\text{ب) } \sqrt{(x^2 - 1)(x^3 - 3x^2)}$$

$$(x^2 - 1)(x^3 - 3x^2) \geq 0$$

$$(x - 1)(x + 1)x^2(x - 3) \geq 0$$

$$(x - 1)(x^2 + x + 1)$$

$$D_f = (-\infty, -1] \cup [3, +\infty) \cup \{0\}$$



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$$\text{الف) } \sqrt{|x - 4| - 3}$$

$$|x - 4| - 3 \geq 0$$

$$|x - 4| \geq 3$$

$$x - 4 \geq 3 \quad \vee \quad x - 4 \leq -3$$

$$x \geq 7 \quad \vee \quad x \leq 1$$

$$\text{ب) } \sqrt{4 - |x - 4|}$$

$$4 - |x - 4| \geq 0$$

$$4 \geq |x - 4|$$

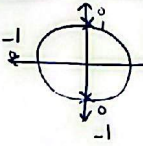
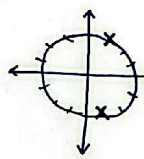
$$-4 \leq x - 4 \leq 4$$

$$0 \leq x \leq 8$$

$$D_f = [-4, 4]$$

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$$D_f = (-\infty, -1] \cup [0, +\infty) \quad 4 \geq x \geq -4$$

الف) $\sqrt{1-x x }$ $1-x x \geq 0$ $1 \geq x x $ $D_f = (-\infty, 1]$	ب) $\frac{1}{\sqrt{\mu- x-0 -1}}$ $\mu- x-0 -1 > 0$ $\mu > x-0 $ $-\mu < x-0 < \mu$ $\mu < x < \mu$	$D_f = (\mu, \nu)$	6
الف) $y = \frac{\sin^2 x - 1}{\cos x}$ $\cos x \neq 0$	$D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$		7
ب) $y = \frac{\cos x}{\mu \cos x - 1}$ $\mu \cos x \neq 1$ $\cos x \neq \frac{1}{\mu}$	$D_f = \mathbb{R} - \{\mu k\pi \pm \frac{\pi}{\mu}\}$		8
الف) $\frac{x+\mu}{ \mu x+1 - x+\mu }$ $D_f = \mathbb{R} - \{\mu, -\frac{\mu}{\mu}\}$	$\mu x+1 \neq x+\mu \rightarrow x \neq \mu$ $\mu x+1 \neq -x-\mu \rightarrow x \neq -\frac{\mu}{\mu}$		9
ب) $\sqrt{ \mu x+1 - x+\mu }$ $ \mu x+1 \geq x+\mu $ $(\mu x+1)^2 \geq (x+\mu)^2$ $\mu^2 x^2 + 2\mu x + 1 \geq x^2 + 2\mu x + \mu^2$ $(\mu^2 - 1)x^2 \geq \mu^2 - 1$ $(\mu-1)(\mu+1)x^2 \geq (\mu-1)(\mu+1)$ $x^2 \geq 1$ $x \leq -1$ or $x \geq 1$	$D_f = (-\infty, -\frac{\mu}{\mu}] \cup [\mu, +\infty)$		10
الف) $\log(\mu \cos x + 1)$ $\mu \cos x + 1 > 0$ $\mu \cos x > -1$ $\cos x > -\frac{1}{\mu}$	ب) $\sqrt{\log \frac{x-1}{x+1}}$ $\log \frac{x-1}{x+1} \geq 0$ $\frac{x-1}{x+1} \geq 1$ $\frac{x-1-x-1}{x+1} \geq 0$ $\frac{-2}{x+1} \geq 0$ $x+1 < 0$ $x < -1$	$D_f = (-\infty, -1)$	11

$$D_f = \mathbb{R} - \left\{ \left(\mu k\pi + \frac{\mu\pi}{\mu}, \mu k\pi + \frac{\mu\pi}{\mu} \right) \right\} \cup \left\{ \frac{-\mu}{x+1} \geq 0 \right\} \cup \left\{ \frac{-1}{x+1} \geq 0 \right\} \rightarrow D_f = (-\infty, -1)$$