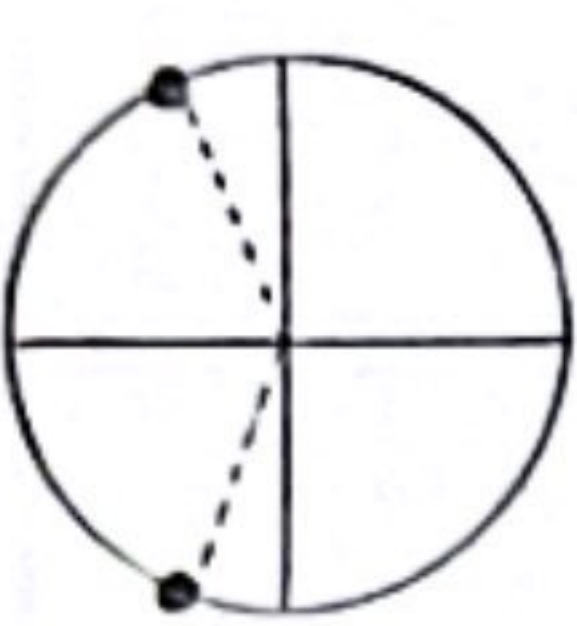
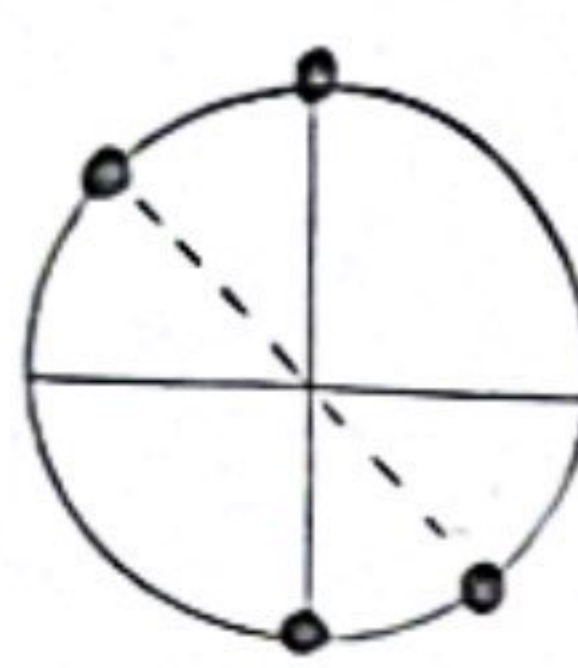
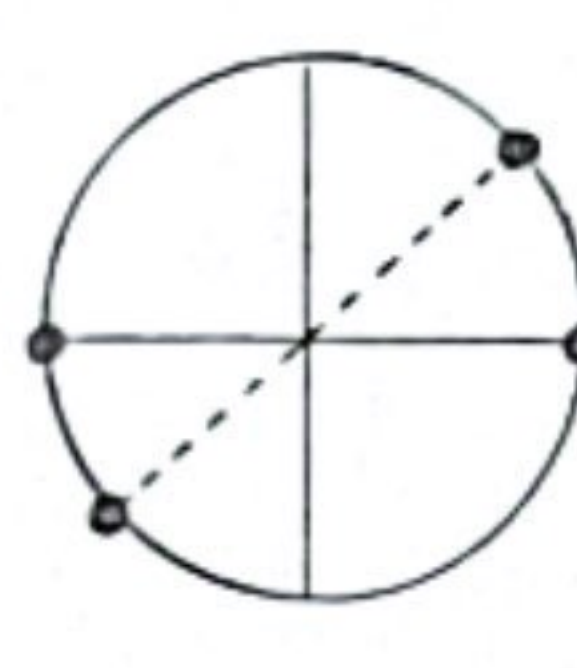


نام و نام خانوادگی شماره کلاس بهنام خستری

الف) $\cos x + 1 \neq 0$ $\cos x \neq -\frac{1}{1}$  $D_f = \mathbb{R} - \left\{ 2k\pi + \frac{\pi}{1}, 2k\pi + \frac{\pi}{1} \right\}$	ب) $\cos x - 1 \neq 0$ $\cos x \neq 1$  $D_f = \mathbb{R} - \{ 2k\pi \}$	۱
الف) $\tan x + 1 \neq 0 \rightarrow \tan x \neq -1$ $\cos x \neq 0$  $D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2}, k\pi - \frac{\pi}{2} \right\}$	ب) $\cot x - 1 \neq 0 \rightarrow \cot x \neq 1$ $\sin x \neq 0$  $D_f = \mathbb{R} - \left\{ k\pi, k\pi + \frac{\pi}{2} \right\}$	۲
الف) $-1 \leq x^2 - 2 \leq 1$ $1 \leq x^2 \leq 3 \rightarrow \begin{cases} 1 \leq x \leq \sqrt{3} \\ -1 \leq x \leq -\sqrt{3} \end{cases} \Rightarrow D_f = [-\sqrt{3}, -1] \cup [1, \sqrt{3}]$ ب) $\begin{cases} -1 \leq \sqrt{x} - 3 \leq 1 \\ x \geq 0 \end{cases} \rightarrow \begin{cases} 2 \leq \sqrt{x} \leq 4 \\ x \geq 0 \end{cases} \rightarrow 4 \leq x \leq 16 \Rightarrow D_f = [4, 16]$		۳
الف) $-1 \leq x - 3 \leq 1 \rightarrow 2 \leq x \leq 4 \rightarrow \begin{cases} 2 \leq x \leq 4 \\ -2 \leq x \leq -4 \end{cases} \Rightarrow D_f = [-4, -2] \cup [2, 4]$ ب) $-1 \leq x^2 + 1 \leq 1 \rightarrow \begin{cases} x^2 + 1 \leq 1 \rightarrow x^2 \leq 0 \rightarrow (x+3)(x+0) \leq 0 \\ x^2 + 1 \geq -1 \rightarrow x^2 + 1 + 2 \geq 0 \rightarrow (x+2)(x+1) \geq 0 \end{cases}$ $\frac{-3}{+} \quad \frac{-2}{+} \quad \frac{-1}{+} \Rightarrow D_f = [-3, -2] \cup [-1, 0]$		۴
الف) $x^2 - 4 > 0 \rightarrow x^2 > 4 \rightarrow \begin{cases} x > 2 \\ x < -2 \end{cases} \Rightarrow D_f = (-\infty, -2) \cup (2, +\infty)$ ب) $2 - x > 0 \rightarrow x < 2 \rightarrow -2 < x < 2 \Rightarrow D_f = (-2, 2)$		۵

$$\text{الف) } \begin{cases} \omega - x > 0 \rightarrow x < \omega \\ x - 1^{\mu} > 0 \rightarrow x > 1^{\mu} \\ x - 1^{\mu} \neq 1 \rightarrow x \neq 1^{\mu} \end{cases} \Rightarrow D_f = (1^{\mu}, \omega) - \{1^{\mu}\}$$

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$$\text{ب) } \begin{cases} x^{1^{\mu}-1} > 0 \rightarrow x^{1^{\mu}} > 1 \rightarrow \begin{cases} x > 1 \\ x < -1 \end{cases} \\ x + 1^{\mu} > 0 \rightarrow x > -1^{\mu} \\ x + 1^{\mu} \neq 1 \rightarrow x \neq -1^{\mu} \end{cases} \Rightarrow D_f = ((-1^{\mu}, -1) \cup (1, +\infty)) - \{-1^{\mu}\}$$

$$\text{الف) } \begin{cases} \frac{x^{1^{\mu}-1} - 1^{\mu} x + 1^{\mu}}{x - 1^{\mu}} > 0 \rightarrow \frac{(x - 1^{\mu})(x - 1)}{x - 1^{\mu}} > 0 \\ x - 1^{\mu} \neq 0 \rightarrow x \neq 1^{\mu} \end{cases} \quad \frac{1}{-\phi + \frac{1}{\phi} + \mu^*} \Rightarrow D_f = (1, +\infty) - \{1^{\mu}\}$$

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$$\text{ب) } \begin{cases} \frac{x + 1^{\mu}}{x - 1^{\mu}} > 0 \rightarrow \frac{-1^{\mu}}{+\phi - \frac{1}{\phi} + \mu} \\ x - 1^{\mu} \neq 0 \rightarrow x \neq 1^{\mu} \\ x + \omega > 0 \rightarrow x > -\omega \\ x + \omega \neq 1 \rightarrow x \neq -1^{\mu} \end{cases} \Rightarrow D_f = ((-\omega, -1^{\mu}) \cup (1, +\infty)) - \{-1^{\mu}\}$$

$$\text{الف) } \begin{cases} 1^{\mu} - \log_r^{(n-1)} \geq 0 \rightarrow \log_r^{(n-1)} \leq 1^{\mu} \rightarrow n-1 \leq 1 \rightarrow n \leq 1 \\ x - 1^{\mu} > 0 \rightarrow x > 1^{\mu} \end{cases} \Rightarrow D_f = (1^{\mu}, 1.0]$$

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$$\text{ب) } \begin{cases} x > 0 \\ 1^{\mu} \log_r^{(n-1)} - 1 > 0 \rightarrow \log_r^{(n-1)} > \frac{1}{1^{\mu}} \rightarrow x > \sqrt{1^{\mu}} \end{cases} \Rightarrow D_f = (\sqrt{1^{\mu}}, +\infty)$$

$$\text{الف) } x^n + 1 \neq 0 \\ x^n \neq -1 \rightarrow D_f = \mathbb{R}$$

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$$\text{ج) } x^n - 1 \neq 0 \\ x^n \neq 1 \rightarrow x^{\mu n} \neq 1^{\mu} \rightarrow x \neq \frac{1}{1^{\mu}} \\ \Rightarrow D_f = \mathbb{R} - \left\{\frac{1}{1^{\mu}}\right\}$$

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$$\text{ب) } x^n - 1 \neq 0 \\ x^n \neq 1 \rightarrow x^n \neq \varepsilon \\ x \neq 0 \rightarrow D_f = \mathbb{R} - \{0\}$$

$$\text{د) } x^n - 1^{\mu} \neq 0 \rightarrow x^n \neq 1^{\mu} \rightarrow x \neq \log_{\varepsilon}^{1^{\mu}} \\ \Rightarrow D_f = \mathbb{R} - \left\{\log_{\varepsilon}^{1^{\mu}}\right\}$$

$$\text{الف) } x^n + 1 \in \omega$$

$$n \in \frac{\omega - 1}{1^{\mu}} \Rightarrow D_f = \left\{x \mid x = \frac{k-1}{1^{\mu}}, k \in \omega\right\}$$

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$$\text{ب) } \frac{1^{\mu} x - 1^{\mu}}{1^{\mu} x - \omega} \in \omega_1 \Rightarrow x = \frac{\omega \omega - 1^{\mu} + 1^{\mu}}{1^{\mu} \omega - 1^{\mu}} \Rightarrow D_f = \left\{x \mid x = \frac{\omega k - 1^{\mu}}{1^{\mu} k - 1^{\mu}}, k \in \omega\right\}$$