

Subject:

16, 28

كل شئ محدد تكليفه و كلاس

$$y = \sqrt{\frac{n^2 - 4n}{n^2 - n}} \rightarrow \frac{n(n-4)}{n(n-1)} \rightarrow \frac{n-4}{n-1}$$

$$\frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} - \frac{1}{1}$$

$$D_f = (-1, 0) \cup (0, 1) \cup [4, +\infty)$$

$$y = \sqrt{\frac{n^2 - 4n}{n^2 - n}} \rightarrow \frac{n(n-4)}{n(n-1)} \rightarrow \frac{n-4}{n-1}$$

$$\frac{-1}{-1} + \frac{0}{0} + \frac{1}{1} - \frac{1}{1}$$

$$D_f = \mathbb{R} - \{-1, 0, 1\}$$

$$y = \frac{n+1}{\sqrt{n+|n|}}$$

$$n + |n| = 0$$

$$\Rightarrow n + |n| \neq 0 \Rightarrow n \neq 0 \text{ و } n < 0$$

$$n + |n| > 0$$

$$D_f = (0, +\infty)$$

$$y = \frac{1}{\sqrt{n|n|}}$$

$$\left. \begin{array}{l} n|n| > 0 \\ |n| > 0 \end{array} \right\} \Rightarrow n > 0, n|n| \neq 0 \Rightarrow n \neq 0 \Rightarrow n > 0$$

$$D_f = (0, +\infty)$$

$$y = \sqrt{r - [n]} \Rightarrow r - [n] > 0 \Rightarrow r > [n] \Rightarrow D_f = (-\infty, r)$$

$$y = \frac{1}{\sqrt{r - [n]}}$$

$$r - [n] > 0 \Rightarrow r > [n] \Rightarrow D_f = (-\infty, r)$$

$$y = \sqrt{\left[n - \frac{1}{r}\right] + \left[n + \frac{r}{r}\right]} \Rightarrow \left[n - \frac{1}{r}\right] + \left[n + \frac{r}{r}\right] > 0 \Rightarrow$$

$$\left[n - \frac{1}{r}\right] + \left[n - \frac{1}{r} + 1\right]$$

$$\left[n - \frac{1}{r}\right] + \left[n - \frac{1}{r}\right] + 1$$

$$D_f = \left[+\frac{1}{r}, +\infty\right)$$

$$r\left[n - \frac{1}{r}\right] > 1$$

$$\left[n - \frac{1}{r}\right] > -\frac{1}{r} \Rightarrow n > \frac{1}{r}$$

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Subject:

$$y = \sqrt{\left[n - \frac{1}{r}\right] + \left[-n + \frac{1}{r}\right]} \quad \left[n - \frac{1}{r}\right] + \left[-n + \frac{1}{r}\right] \geq 0 \quad D_f = \emptyset \quad (-)$$

1, 2, 5

$$\left[n - \frac{1}{r}\right] - \left[n - \frac{1}{r}\right] = 0 \Rightarrow n - \frac{1}{r} \in \mathbb{Z} \Rightarrow n \in \mathbb{Z} + \frac{1}{r}$$

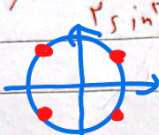
$$D_f = \{n \mid n = k + \frac{1}{r}, k \in \mathbb{Z}\}$$

$$y = \frac{r}{\sin n - 1} \Rightarrow \sin n - 1 \neq 0 \Rightarrow \sin n \neq 1 \Rightarrow n \neq k\pi + \frac{\pi}{2} \Rightarrow D_f = \mathbb{R} - \left\{k\pi + \frac{\pi}{2}\right\}$$

(1)

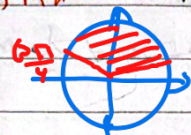
$$y = \frac{r}{r \sin n - 1} \Rightarrow r \sin n - 1 \neq 0 \Rightarrow r \sin n \neq 1 \Rightarrow \sin n \neq \frac{1}{r} \Rightarrow \sin n \neq \pm \frac{1}{r} \quad (-)$$

1, 2, 6

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


$$y = \sqrt{r \sin n - 1} \quad r \sin n - 1 \geq 0 \Rightarrow r \sin n \geq 1 \Rightarrow \sin n \geq \frac{1}{r} \quad (-)$$

1, 2, 6

$$D_f = \left[\arcsin\left(\frac{1}{r}\right), \pi - \arcsin\left(\frac{1}{r}\right) \right] \cup \left[\arcsin\left(-\frac{1}{r}\right), \pi - \arcsin\left(-\frac{1}{r}\right) \right]$$


$$y = \sqrt{\cos n - 1} \quad \cos n - 1 \geq 0 \Rightarrow \cos n \geq 1 \Rightarrow D_f = \{k\pi\}$$

(ب)

$$\cos y = |n| - r \quad -1 \leq |n| - r \leq 1 \quad D_f = [-r, -r] \cup [r, r] \quad (-)$$

(الف - 7)

$$\begin{aligned} -1 \leq |n| - r &\Rightarrow |n| \geq r - 1 \Rightarrow n \geq r - 1 \text{ or } n \leq -r + 1 \\ 1 \leq |n| - r &\Rightarrow |n| \leq r + 1 \Rightarrow -r - 1 \leq n \leq r + 1 \end{aligned}$$

(الف - 7)

$$y = \arcsin(n^r + r^{n+1}) \quad -1 \leq n^r + r^{n+1} \leq 1 \quad (-)$$

$$-1 \leq n^r + r^{n+1} \Rightarrow 0 \leq n^r + r^{n+1} \Rightarrow 0 \leq (n^r + r^{n+1}) \Rightarrow -1 \leq n \leq r$$

1, 2, 6

$$n^r + r^{n+1} \leq 1 \Rightarrow n^r + r^{n+1} \leq 0 \Rightarrow n(n+r) \leq 0 \Rightarrow n \leq -r$$

1, 2, 6

$$D_f = [-r, -r] \cup [-1, 0]$$

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$$y = \sqrt{r - \log_r(n-r)} \Rightarrow (n-r) > 0 \Rightarrow n > r$$

$$r - \log_r(n-r) > 0 \Rightarrow n-r \leq 9 \Rightarrow n \leq 11$$

$$\left. \begin{array}{l} r < n \leq 11 \\ D_f = (r, 11] \end{array} \right\} \text{ (الف) - 1}$$

$$y = \log(n^r - n) \quad n^r - n > 0 \Rightarrow n(n-1)(n+1) > 0 \Rightarrow D_f = (-1, 0) \cup (1, \infty)$$

(د) ✓

$$- \frac{1}{x} + \frac{0}{x} - \frac{1}{x} +$$

$$y = \frac{r}{r^n + 1} \quad r^n \neq -1 \Rightarrow D_f = \mathbb{R}$$

(هـ) - 9

$$y = \frac{r}{r^n - 1} \quad r^n - 1 \neq 0 \Rightarrow r^n \neq 1 \Rightarrow n \neq 0 \Rightarrow D_f = \mathbb{R} - \{0\}$$

(ب) ✓

$$y = \frac{r}{r^n - r} \quad r^n - r \neq 0 \Rightarrow r^n \neq r \Rightarrow D_f = \mathbb{R} - \log_r(r)$$

(ج)

$$y = \frac{r}{r^n - r} \quad r^n - r \neq 0 \Rightarrow r^n \neq r \Rightarrow D_f = \mathbb{R} - \log_r(r)$$

(د)

$$y = (r^n + 1)! \quad r^n + 1 \geq 0 \Rightarrow r^n \geq -1 \Rightarrow n \geq -\frac{1}{r} \Rightarrow D_f = [-\frac{1}{r}, \infty)$$

(الف) - 1

$$y = \left(\frac{r^n - r}{r^n - a} \right)! \quad \frac{r^n - r}{r^n - a} > 0 \Rightarrow \frac{r^n - r}{r^n - a} < 1 \Rightarrow n < \frac{r}{r-a}$$

(ب)

$$\frac{r^n - r}{r^n - a} \in \mathbb{W} \Rightarrow n \in \frac{aW - r}{rW - r}$$

$$D_f = (-\infty, \frac{r}{r-a}] \cup (\frac{r}{r-a}, \infty)$$

$$D_y = \{ n \mid n = \frac{aK - r}{rK - r}, K \in \mathbb{W} \}$$

IDEA