

اشياء ايندي لاس دهم بيسر B

$$f(n) = \sqrt{\frac{n-1}{n} - \frac{n}{n-1}}$$

$$f(n) = \frac{\frac{1}{n+1} - \frac{2}{n}}{\frac{3}{n-1} + \frac{1}{n+2}}$$

$$\frac{\frac{1}{n+1} - \frac{2}{n}}{\frac{3}{n-1} + \frac{1}{n+2}}$$

$$Df = (-\infty, 0) \cup [\frac{1}{2}, 1)$$

$$\frac{3}{n-1} \neq -\frac{1}{n+2} \Rightarrow 3n+2 \neq 1-n$$

$$\Rightarrow n \neq -\frac{3}{4} \Rightarrow Df = \mathbb{R} - \left\{ -1, 0, 1, 2, -\frac{3}{4} \right\}$$

$$f(n) = \sqrt{\left(\left(\frac{1}{n}\right)^n - 9\right)(32 - n^2)}$$

$$\frac{-2}{+ \phi - \phi +}$$

$$\Rightarrow Df = (-\infty, -2] \cup \left[\frac{32}{9}, +\infty\right)$$

$$\sqrt{n-1} + \sqrt{y+1} = 3 \Rightarrow \sqrt{y+1} = 3 - \sqrt{n-1} \Rightarrow \sqrt{y+1} \geq 0 \Rightarrow 3 - \sqrt{n-1} \geq 0$$

$$\Rightarrow \sqrt{n-1} \leq 3 \Rightarrow n-1 \leq 9 \Rightarrow n \leq 10 \Rightarrow Df = [1, 10]$$

$$f(n) = \frac{\log_e (n^2 - n - 2)}{\sqrt{n^2 - 1} + 1}$$

$$n^2 - n - 2 > 0 \Rightarrow (n-2)(n+1) > 0$$

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

$$\sqrt{n^2 - 1} \Rightarrow n^2 \geq 1 \Rightarrow n \geq 1$$

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

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

$$f(n) = \sqrt{3 + an - n^2}$$

$$[-2, b] \Rightarrow an^2 + bn + c \Rightarrow s = -\frac{b}{a}, p = \frac{c}{a}$$

$$\Rightarrow a = -1 \Rightarrow s = +b, p = -c$$

$$\Rightarrow b + (-2) = a \text{ and } -2b = -3 \Rightarrow b = \frac{3}{2} \text{ and } a = -\frac{1}{2} \Rightarrow -\frac{1}{2} + \frac{3}{2} = 1$$

$$\begin{cases} 3n - 2 \geq n \Rightarrow 2n \geq 2 \Rightarrow n \geq 1 \\ 2n + 3 \geq n \Rightarrow n \leq -3 \Rightarrow -3 \leq n < 1 \end{cases}$$

$$f(n) \geq n$$

$$Df = [-3, 1)$$

$$f(n) = n^2 - 2n \Rightarrow f\left(\sin \frac{\pi}{4} + \cos \frac{\pi}{4}\right) = ?$$

-4

$$\Rightarrow f\left(\frac{\sqrt{2}}{2} + 1\right) \Rightarrow 2\left(\frac{\sqrt{2}}{2} + 1\right)^2 - 2\left(\frac{\sqrt{2}}{2} + 1\right) \Rightarrow \frac{3}{2} + \sqrt{2} + 2 - \sqrt{2} - 2 = -\frac{1}{2}$$

$$f(n) = \frac{n+1}{n-1} \Rightarrow f(f(a)) = a \Rightarrow f\left(\frac{a+1}{a-1}\right) = a \Rightarrow$$

-5

$$\Rightarrow \frac{a+1+\frac{a+1}{a-1}}{\frac{a+1}{a-1}-1} = \frac{1a}{1} = a \Rightarrow$$

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$$\Rightarrow D_f = \mathbb{R} - \{1\}$$

$$f(g(a)) = a \Rightarrow f(\sqrt{a^2-1}) \Rightarrow a^2 - 1 - f\sqrt{a^2-1} + f = 0$$

-6

$$\Rightarrow \sqrt{a^2-1} = t \Rightarrow t^2 - 2t + 2 = 0 \Rightarrow (t-1)^2 = 0 \Rightarrow t = 1$$

$$\Rightarrow \sqrt{a^2-1} = 1 \Rightarrow a^2 = 2 \Rightarrow a \in \left\{ \sqrt{2}, -\sqrt{2} \right\}$$

$$f(n+3) = n^2 - 2n + 5 \Rightarrow n+3 = -2 \Rightarrow n = -5 \Rightarrow f(-2) = 4 + 4 + 5 = 13$$

-7

$$f(n+2) = n^2 + 2n + 5 \Rightarrow n+2 = 1 \Rightarrow n = -1 \Rightarrow f(1) = 1 - 2 + 5 = 4$$

$$f(1) \times f(-2) = 4 \times 13 = 52$$

$$f \cos^2 x + 2 \cos x = \frac{1}{f} \Rightarrow \cos x = \frac{1}{f} \Rightarrow \sin x = \frac{\sqrt{f^2-1}}{f}$$

$$\hookrightarrow \frac{1}{f} \cos x = -\frac{1}{f}$$

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