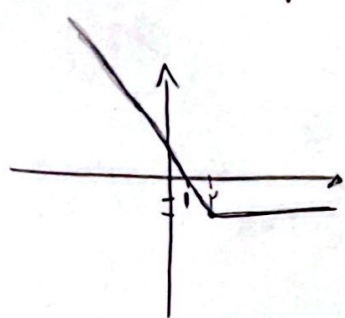


$$+2n^2 \left(\frac{1}{r} - n - 1 \right) \geq 0 \quad | - \quad | - \quad | + \quad | - \Rightarrow D_f = [0, 1] \quad (1) \quad \text{مستأصل بور}$$

$$f(-n) = \sqrt{-n+1-n+2} \quad -n+1-n+2 \geq 0 \quad \begin{matrix} n \leq +2 & n > +2 \\ \downarrow (I) & \end{matrix} \quad (2)$$



$$D_f = (-\infty, 1] \quad \Leftarrow I \cap II \quad \Leftarrow 2n \leq 2 \Rightarrow n \leq 1 \quad \Leftarrow$$

$$\sqrt{-n+1-n+2} \geq 0 \quad f(n) > 0 \quad \Leftarrow (2, 3) \quad (3)$$

$$\frac{n-1}{f(n)} \geq 0 \quad \Leftarrow \text{عبارت مثبت و } n-1 \text{ مثبت} \quad \Leftarrow (1, 2) \quad (4)$$

$$\sqrt{-n+1-n+2} \geq 0 \quad \Leftarrow (1, 2) \quad (5)$$

$$n-1 \geq 0 \Rightarrow n \geq 1$$

$$\sqrt{-n+1-n+2} \geq 0 \quad \Leftarrow (1, 2) \quad (6)$$

$$I \cup II \cup III = \{(2, 3) \cup (-2, 1)\}$$

$$X \Rightarrow \text{عبارت } \Leftarrow n-1 < 0 \quad f(n) > 0 \quad \Leftarrow [-\infty, 2) \quad (7)$$

$$9n^4 - 4n^3 - 4n - \frac{4}{n} = k(3n^2 + an + b) \quad \begin{matrix} a = -1 & b = -3 \\ \text{عبارت ما} \end{matrix}$$

$$y = \sqrt{n^3 + n - \frac{4}{n} - \frac{4}{n}} \Rightarrow n \neq 0 \quad \frac{n^4 + n^3 - 4n^2 - 4}{n^4}$$

$$\frac{n^4 + n^3 - 4n^2 - 4}{n^4} \geq 0 \quad \Rightarrow \quad \frac{n^4 + n^3 - 4n^2 - 4}{n^4} \geq 0 \quad \Rightarrow \quad \frac{n^4 + n^3 - 4n^2 - 4}{n^4} \geq 0$$

$$n^3 + n - 4 = 0 \Rightarrow n^3 + n - 4 = 0 \Rightarrow 2n^2 - 1 = 1 \quad (8)$$

$$n^3 + n - 1 = 0 \Rightarrow n = 2 \Rightarrow 2 \times 2 - 1 = 3 \quad (9)$$

$$(2n^3 - 4) + (2n^3 - 4)$$

$$f(n) = (2n^3 - 4) + 1 \quad \frac{2n^3 + 1 + 12n - 4n^2}{2n^3 + 1 + 12n - 4n^2}$$

$$g(n) = (2n^3 - 4) - 2 \quad \frac{2n^3 + 1 + 12n - 4n^2}{2n^3 + 1 + 12n - 4n^2}$$

$$\frac{1-2}{1+1} = \frac{-1}{2} = -\frac{1}{2}$$

$$f(x) = \sqrt{\sqrt{x-4} + 2}^2$$

$x-4+4+4\sqrt{x-4}$

$$g(x) = \sqrt{\sqrt{x-4} - 2}^2$$

$x-4+4-4\sqrt{x-4}$

(1)

$$f(x) + g(x) = |\sqrt{x-4} + 2| + |\sqrt{x-4} - 2|$$

مساوی < 0

$$\sqrt{x-4} + 2 + \sqrt{x-4} - 2$$

با توجه به اینکه در صواب آف باید از یکسان داشته باشیم (چون C نباید مساوی 0 شود) و داخل از یکسان به ما داده شده

$$2\sqrt{x-4}$$

$$a=0$$

$$b=2$$

$$c=-4$$

$$\frac{2}{-4} = \left(-\frac{1}{2}\right)$$

5

$$x=2 \Rightarrow g(x)=1 / f(x) = \frac{2}{-1} = -2 \Rightarrow \left(-\frac{1}{2}\right)$$

$$f(x) = \frac{x+2}{(x-4)(x-1)} \quad (9)$$

به ازای $x=2$ از 3 جواب نداریم

$$x=1 \Rightarrow f(x)=0 \quad \times$$

$$x=3 \Rightarrow \quad / \quad / \quad / \quad \times$$

$$x=0 \Rightarrow g(x)=4 \quad f(x) = \frac{2}{12} \Rightarrow \frac{f}{g} = \left(\frac{1}{6}\right)$$

$$\frac{g}{f} = \left\{ \left(2, -\frac{1}{2}\right), (0, 4) \right\}$$

(1)

$$الف) f(4x) = \left\{ \left(\frac{1}{4}, 2\right), \left(\frac{3}{4}, -1\right), (2, 2), \left(-\frac{1}{4}, 4\right) \right\}$$

$$ب) f(x^2) = \left\{ (1, 2), (-1, 2), (\sqrt{3}, -1), (-\sqrt{3}, -1), (2, 2), (-2, 2) \right\}$$

$$ج) 2g^2(x) + 1 = \left\{ (-2, 19), (1, 3), (3, 9), (-1, 1) \right\}$$

$$د) f \cap g = 1 / 3 / -1$$

$$\frac{2f}{g} \rightarrow \text{و نباید 2 باشد} \Rightarrow \times$$

$$\frac{2f}{g} = \left\{ \left(1, \frac{2}{1}\right), \left(3, \frac{-2}{1}\right) \right\} \Rightarrow \left\{ (1, 2) \cup (3, -2) \right\}$$