

آید انامداری
دوازدهم دفتران
تالیف ۲

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$$f(x) = x^4 + 1 + 2x + 9x^2 + 1 - 4x + mx^2 + nx + mn$$

$$(10+m)x^2 + (-4+n)x + mn + 1$$

$$f(x) = -39$$

$$g(x) = \{(f, -10), (f, p+1), (p+2, -1), (-9, p+k)\}$$

$$p+1 = -10 \quad p = -11$$

$$-1 = -9 + k$$

$$k = 10$$

$$m+n+p+k = -10 + f - 11 + 10 = -7$$

الف) $\sqrt{\frac{x-2}{x^2-2x-1}}$

$$\frac{x-2}{x^2-2x-1} \geq 0$$

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

$$x^2 - 2x - 1 = 0$$

$$f - f(-1) = 14$$

$$x^2 = t$$

$$x^2 = -2x$$

$$D = (-2, 2) \cup (2, +\infty)$$

ب) $\frac{2x^2+1}{f-2[-x]}$

$$f-2[-x] \neq 0$$

$$f \neq 2[-x]$$

$$[-x] \neq 2$$

$$2 \leq -x < 3$$

$$-2 \geq x > -3$$

$$R = (-3, -2]$$

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

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

$$|x|+x > 0$$

$$f(x) = \frac{\sqrt{|x-1|-x^2}}{|x|-1}$$

$$|x-1|-x^2 \geq 0$$

$$|x|-1 \neq 0$$

$$[-2, 1) - \{-1\}$$

$$[-2, 1)$$

$$x \geq 1$$

$$x-2-x^2 \geq 0$$

$$1-f(-1)(2) = 9$$

$$[-2, 1)$$

$$\frac{1}{|x-2|-1} = k$$

$$||x-2|-1| - k \neq 0$$

$$|x-2|-1 = k$$

$$|x-2| \neq k+1$$

$$x-2 \neq k+1$$

$$x-2 \neq -k-1$$

$$x \neq k+3$$

$$x \neq -k+1$$

$$||x-2|-1| \neq k$$

$$|x-2|-1 = -k$$

$$|x-2| \neq -k+1$$

$$x-2 \neq -k+1$$

$$x-2 \neq k-1$$

و ۰، ۲، ۳ را می دهد

$$2k = 2 \quad (k=1)$$

$$-k+3 = +k+1$$

$$-k+3 = k+3$$

$$2k = 0 \quad k=0$$

$$2k = -2 \quad (k=-1)$$

$$k+3 = -k+3$$

$$2k = 0 \quad k=0$$

$$k+3 = -k+1$$

$$2k = -2 \quad (k=-1)$$

$$2k = -2 \quad (k=-1)$$

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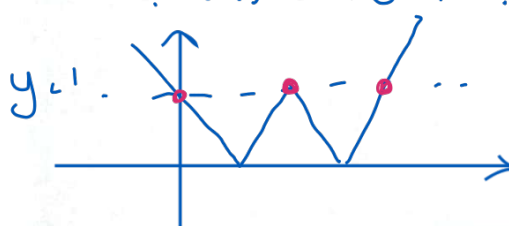
$$2k = -2 \quad (k=-1)$$

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بارسم شکل را صحت بررسی می!



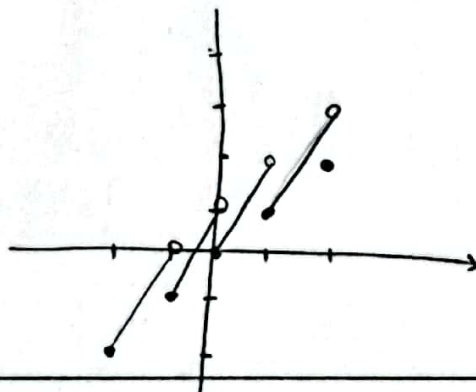
$$-2 \leq x < -1 \quad 2x+2$$

$$-1 \leq x < 0 \quad 2x+1$$

$$0 \leq x < 1 \quad 2x$$

$$1 \leq x < 2 \quad 2x-1$$

$$2 \rightarrow 2x$$



نمودار $2x - [x]$ در بازه $[-2, 2]$

$$f(x) = \frac{x^2 - 4x + 3}{x + a} + b$$

$$\frac{x^2 - 4x + 3}{x + a} + b = x$$

$$\cancel{x^2} - 4x + 3 + b\cancel{x} + ab = \cancel{x^2} + ax$$

$$(-4+b)x = ax$$

$$-4+b = a$$

$$3+ab=0$$

$$3+(-4+b)b=0$$

$$3-4b+b^2=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

$$b^2-4b+3=0$$

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$$a-b = -3-1 = -4$$

$$-1-3 = -4$$

$$f(x) = \begin{cases} \frac{x^3 + 2x^2 - x - 2}{x^2 - 1} & x \neq \pm 1 \\ \frac{ax + 2}{x + b} & x = \pm 1 \end{cases}$$

$$x \neq \pm 1$$

$$x = \pm 1$$

$$\frac{(x-1)(x+1)(x+2)}{(x+1)(x-1)}$$

$$x+C = x+2$$

$$C=2$$

$$b+C = 2 + \frac{1}{1} = 3$$

$$3b-a = -1$$

$$b+a = 3$$

$$3b = 2$$

$$b = \frac{2}{3}$$

$$a = \frac{5}{3}$$

$$x \rightarrow 1$$

$$\frac{a+2}{1+b} = 3$$

$$a+2 = 3+3b$$

$$3b = -1$$

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

$$-a+2 = -1+b$$

$$b+a = 3$$

$$f(x) = \sqrt{fx - 4a} + 1 - 1$$

$$g(x) = \sqrt{bx + 1} + 1 - 1$$

$$f - g = \{(1, k)\}$$

1

2

$$b - fx \geq 0 \quad \frac{b}{f} \geq x$$

$$Df \cap Dg = \{1\}$$

$$\frac{f}{f} a = 1 \quad a = \frac{f}{f}$$

$$fx - 1 \geq 0 \quad x \geq \frac{1}{f} a$$

$$\frac{b}{f} = 1 \quad b = f$$

$$f - g = \sqrt{fx - 1} + 1 - 1 - \sqrt{bx + 1} - 1 = k$$

$$\rightarrow x = 1$$

$$1 - 1 - 1 - 1 = -2$$

$$-1 - 1 = -2$$

$$1 - 1 = 0$$

$$1 - 1 = 0$$

$$1 - 1 = 0$$

$$1 - 1 = 0$$

9

$$f(x) = \sqrt{m - x} + n$$

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

$$g(x) = \sqrt{x + 1}$$

$$x + 1 \geq 0$$

$$g(x) = \sqrt{x + 1}$$

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

$$Df \times g = [-1, 5]$$

$$x \geq -1$$

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

$$m + n = 5 + 4\sqrt{x} =$$

$$5 + 4\sqrt{x}$$

$$m - x \geq 0$$

$$m \geq x \quad f(x) \rightarrow \sqrt{5 - x} + n = 4\sqrt{x}$$

$$m = 5$$

$$5 + n = 4\sqrt{x} \quad n = 4\sqrt{x} - 5$$

$$[-2, 2]$$

10

2

$$(-1)^x (x - [x]) = \frac{1}{x}$$

$$[-2, -1) \quad x + 2$$

$$[-1, 0) \quad x + 1$$

$$[0, 1) \quad x$$

$$[1, 2) \quad x - 1$$

$$x = 2 \rightarrow 0$$



4 جواب دارد.