

17, 150

نام و نام خانوادگی ... آید علی ... شماره ... کلاس ...

ضریب x^2 و x مساوی است.
 $f(x) = x^2 + 2x + 1 + 9x^2 - 4x + 1 + mx^2 + nx + mn$

$\Rightarrow 1 + 9 + m = 0 \Rightarrow m = -10$
 $2 - 4 + n = 0 \Rightarrow n = 2$
 $g(x) = \{(4, -10), (4, P+1), (P+1, 1), (-9, P+K)\}$
 $P+1 = -10 \Rightarrow P = -11$
 $1 = -11 + K \Rightarrow K = 12$
 $K = +10$

$m+n+P+K = (-10) + 2 + (-11) + 12 = -7$

الف $x^4 - 2x^2 - 8 = (x^2 - 4)(x^2 + 2) \Rightarrow x \neq 2, -2$

ب $Df = (2, +\infty) - [2]$

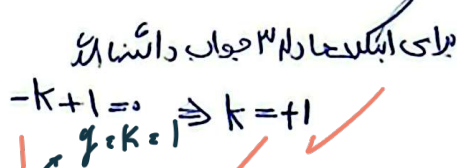
ج $4 = 2[-x] \Rightarrow 2 = [-x] \rightarrow x = [-2, -3]$
 $Df = R - [-2, -3]$

الف $x > 0$ $x(x^2 - 1) = \frac{1}{-1+1-1} \Rightarrow Df = [1, +\infty)$

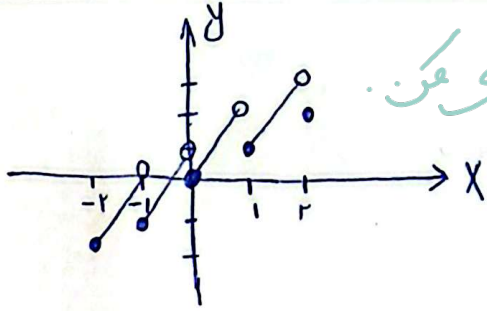
ب $x \neq 1, -1$

ج $x \geq 2 \rightarrow -x^2 + x - 2 \rightarrow -(x+2)(x-1)$
 $x < 2 \rightarrow -x^2 - x + 2 \rightarrow -(x+2)(x-1)$
 $Df = [-2, 1) - [-1]$

$|x-2|-1=k \Rightarrow |x-2|=k+1$
 $-k+1$



$x-2 = \frac{1}{2} \Rightarrow x = \frac{5}{2}$



تعداد دنباله بازه بندی

$$f(x) = \frac{(x-3)(x-1)}{x+a} + b \rightarrow \text{حالت (1)} \rightarrow a=-1, x-3+b=x \Rightarrow b=3 \checkmark$$

$$a-b = -4 \checkmark$$

$$\text{و حالت (2)} \rightarrow a=-3, x-1+b=x \Rightarrow b=1 \checkmark$$

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

جواب $\leftarrow \{2\}$

$$f(x) = \frac{(x^2-1)(x+1)}{(x^2-1)} \Rightarrow g(x) = \frac{x+c}{x+2} \Rightarrow c=2 \checkmark$$

$$\frac{ax+2}{x+b} \xrightarrow{x=1} \frac{a+2}{b+1} = 3 \Rightarrow a+2 = 3b+3 \rightarrow a = 3b+1$$

$$\xrightarrow{x=2} \frac{-a+2}{b-1} = 1 \Rightarrow -a+2 = b-1 \Rightarrow a = 3-b$$

$$3b+1 = 3-b \Rightarrow 4b = 2 \Rightarrow b = \frac{1}{2} \quad (a+b = 1.5) \checkmark$$

$$x=1 \rightarrow b-4=0 \Rightarrow b=4 \checkmark$$

$$\hookrightarrow 4-3a=0 \Rightarrow a=\frac{4}{3} \checkmark$$

$$g(x) = \sqrt{4-3x} + 3k$$

$$g(1) \Rightarrow \sqrt{4-3} + 3k = k \Rightarrow k=0$$

$$3a - \frac{b}{4} - k = 3 \times \left(\frac{4}{3}\right) - \frac{4}{4} - 0 = 2$$

$$2k - 2 - 3k = k$$

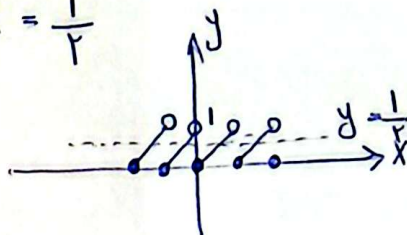
$$k = -1$$

$$2x+2 \geq 0 \Rightarrow x \geq -1, m-x \geq 0 \Rightarrow m \geq x \Rightarrow m=V$$

$$f(x) = \sqrt{V-x} + n, f-g(2) = \sqrt{V} + n - 2\sqrt{V} = 4\sqrt{V} \Rightarrow n = 11\sqrt{V} - 2$$

$$m+n = V + 11\sqrt{V} - 2 = 12 + 11\sqrt{V}$$

$$y = (x - [x]) = \frac{1}{2}$$



$\Rightarrow$

۲ شماره در ۴ نقطه بگیر و قطع می کنند
۳ شماره ۴ جواب دارد

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