

* تالیف دینا ادهی *

"بنا خدا"

دوم دخته B-

$$x \begin{cases} > 0 \\ < 0 \end{cases} \Rightarrow \begin{cases} 1 \\ -1 \end{cases}$$

سه شنبه

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خسرداد

شماره

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May

2020

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الف) $x|x| > 0 \Rightarrow D_f = \mathbb{R}^+ \cup \{0\}$
 $D_g = \mathbb{R}$ مساوی نیست

$|x| \neq 0 \Rightarrow x \neq 0$
 $D_f = \mathbb{R} - \{0\}$ مساوی است

ب) $\frac{x^2 + 5x + 7}{x^2 + 5x + 7} = 1 \Rightarrow g(x) = 1$

$x \neq 0 \Rightarrow D_g = \mathbb{R} - \{0\}$ $D_f = D_g$

$x^2 + 5x + 7 \neq 0 \Rightarrow \Delta = 5^2 - 4 \cdot 7 < 0$ همیشه مساوی است

ج) $-1 < \sin x < 1 \Rightarrow D_f \neq \mathbb{R}$
 $D_g = \mathbb{R}$ مساوی است

الف) $x^2 + 1 \neq 0 \Rightarrow x \neq 0 \Rightarrow \left[\frac{x^2}{x^2 + 1} \right] = 0$
 $[x - [x]] = 0$ مساوی است

ب) $f(x) \Rightarrow [2x] \neq 0 \Rightarrow D_f = \mathbb{R} - [0, \frac{1}{2}) \Rightarrow [x] \neq 0 \Rightarrow D_g = \mathbb{R} - [0, 1)$
 $D_g \neq D_f$ برابر نیست

ج) $f(x) \Rightarrow x - |x| > 0 \Rightarrow x < 0 \Rightarrow D_f = \emptyset$

$D_g \Rightarrow |x| = -x \Rightarrow -2x > 0 \Rightarrow D_g = (-\infty, 0)$ برابر نیست

د) $g(1) = 2$ $f(x+1) = x(x+1)$
 $f(1) = 2$ $g(x+1) = x^2 + x = x(x+1)$ برابر هستند

$f(x) + g(x) = x^2 + x + 1$
 $f(x - g(x)) = x^2 - x + 1$

$f^2(x) - g^2(x) = (x^2 + 1)^2 - x^2$

$2g(x) = 2x \Rightarrow g(x) = x$

$x^4 + 1 + x^2$

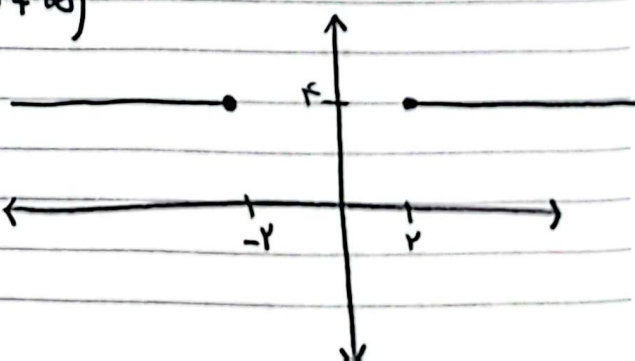
$f(x) + x = x^2 - x + 1$

$f^2(x) - g^2(x) = x^4 + x^2 + 1$ ✓

$f(x) = x^2 + 1$

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

$D_f = D_g \Rightarrow (-\infty, -2] \cup [2, +\infty)$



دینا از همی

$$f(x) = g(x)$$

$$g(x) \neq 0 \Rightarrow (2x-5)(x+1) \neq 0 \Rightarrow (x \neq \frac{5}{2}) (x \neq -1)$$

$$D_g = \{R - \{ \frac{5}{2}, -1 \} \}$$

$$x=1 \Rightarrow a = \frac{1}{p}$$

چهارشنبه

$$f(x) \Rightarrow m = \frac{3}{p} \Rightarrow x^2 - \frac{3}{p}x - \frac{5}{p} \Rightarrow n = -\frac{5}{p} \quad am - bn =$$

$$2ax + 2 = x - b \Rightarrow x=0 \Rightarrow b = -2$$

$$\frac{5}{p} \times \frac{1}{p} = -\frac{3}{p} \Rightarrow \frac{5}{p^2} = -\frac{3}{p} \Rightarrow 5 = -3p \Rightarrow p = -\frac{5}{3}$$

خرداد

شوال

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$$D_f = \{R - \{ \frac{b}{a} \} \} \Rightarrow D_f = D_g$$

$$c = \frac{-1}{fa}$$

$$\frac{ab}{c} = \pm f$$

$$a = \frac{-b}{a} \Rightarrow b = -\frac{f}{p}$$

$$\frac{-1a + 2}{1 - 1a} = \frac{-1}{fa} = c$$

$$a^2 = \frac{1}{f} \Rightarrow a = \pm \frac{1}{p}$$

$$2f-1 = \{(-1, 3), (2, 7), (3, -5), (0, 0)\} \Rightarrow 2f = \{(-1, 4), (2, 8), (3, -4), (0, -1)\} \Rightarrow V$$

$$f = \{(-1, 2), (2, 4), (3, -2), (0, \frac{1}{p})\}$$

$$\frac{2g}{f+g} \quad \left| \begin{array}{l} x = -1 \Rightarrow (4) \\ x = 2 \Rightarrow (1) \\ x = 3 \Rightarrow (3) \end{array} \right.$$

$$g = \{(-1, -4), (2, 4), (3, 2), (0, 0)\}$$

$$\Rightarrow 4, 1, 3$$

$$f = \{(2, a), (-3, 3a-2b), (c, 5), (2, d)\} \Rightarrow a = d$$

-1

$$g = \{(2, -1), (-3, 1), (a-3b, 5)\}$$

$$a = -1 \quad -3 - 2b = 1 \Rightarrow b = -2$$

$$-1 + 4 = C = 5 \Rightarrow d + c = a + c = 4$$

کے جواب $\Delta = 0 \Rightarrow$ سرسر دینا ارہی

$$\sqrt{-(x-a)^2} \Rightarrow D_f = D_g \Rightarrow \text{جواب} = \{a\}$$

$$-x^2 + 2ax - a^2 = -x^2 + x - x$$

$$a = \frac{1}{2} \Rightarrow b = 0 \quad a + b = \frac{1}{2}$$

$$-a^2 = -m \quad m = \frac{1}{4}$$

پنجشنبه

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$$x = 0 \Rightarrow \frac{r}{-c} = \frac{a}{b} \Rightarrow rb = -ac$$

-10

$$\frac{r}{x-c} = \frac{r(x + \frac{a}{r})}{(x-c)(x + \frac{a}{r})}$$

$$x-c \quad (x-c)(x + \frac{a}{r}) \Rightarrow \frac{a}{r} - c = 4 \Rightarrow a - rc = 12$$

$$D_f = D_g \Rightarrow \{R - \{c, -\frac{a}{r}\}\} \Rightarrow \{R - \{c\}\} \Rightarrow c = -\frac{a}{r}$$

$$a = -rc \Rightarrow -rc - rc = 12 \quad a = 4$$

$$c = -3$$

$$b = 4$$

$$\underline{a + b + c = 12}$$