

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۱۰۰ کلاس: دبیر:

الف) $|x| \geq 0 \Rightarrow D_f = \mathbb{R} \quad D_g = \mathbb{R} \quad f(x) \neq g(x)$

ب)

ج) $2 \sin x - 2 \neq 0 \Rightarrow \sin x \neq 1 \Rightarrow -1 \leq \sin x < 1 \Rightarrow D_f = \mathbb{R} \quad D_g = \mathbb{R} \Rightarrow f(x) = g(x)$

د) $|x| \neq 0 \Rightarrow x \neq 0 \Rightarrow D_f = \mathbb{R} - \{0\} \quad D_g = \mathbb{R} - \{0\} \quad f(x) = g(x)$

الف) $x^2 + 1 \neq 0 \Rightarrow x^2 \neq -1 \Rightarrow D_f = \mathbb{R} \quad x[x] \neq 0 \Rightarrow [x] \neq 0 \Rightarrow x \geq 1 \text{ و } x \leq 0$

ب) $[2x] \neq 0 \Rightarrow x \geq 1 \text{ و } x \leq 0 \quad f(x) = g(x)$

ج) $x - |x| \neq 0 \Rightarrow x \neq |x| \quad D_f = \mathbb{R} \quad |x| \neq x \quad f(x) = g(x)$

د) $D_f = \mathbb{R} \quad D_g = \mathbb{R} \quad \frac{x^3 + x}{x-1} = \frac{x(x^2-1)}{x-1} = \frac{x(x-1)(x+1)}{x-1} = x^2 + x \quad f(x) = g(x)$

$\begin{cases} f(x) + g(x) = x^2 + x + 1 \rightarrow 2f(x) = 2x^2 + 2 \Rightarrow f(x) = x^2 + 1 \\ f(x) - g(x) = x^2 - x + 1 \end{cases} \quad g(x) = x$

$f^2(x) - g^2(x) = (x^2 + 1)^2 - x^2 = x^4 + 2x^2 + 1 - x^2 = x^4 + x^2 + 1$

$2x^2 - 5x - 5 \neq 0 \Rightarrow \begin{cases} x \neq -1 \\ x \neq \frac{5}{2} \end{cases}$

$x^2 - m(x+n) = (x+1)(x-\frac{5}{2})$

$x^2 - mx + n = x^2 - 1/2x - 2/5$

$m = 1/2 \quad n = -2/5$

$$bx + r = c \Rightarrow \wedge cx + bc = bx + r$$

$$\wedge x + b$$

$$c(\wedge x + b) = bx + r$$

$$bx + r = 0 \Rightarrow bx = -r$$

$$\wedge x + b = 0$$

$$\wedge x = -b$$

$$x = \frac{-b}{\wedge} \Rightarrow \frac{-b}{\wedge} = a$$

$$f(x) = 0 \Rightarrow c = 0$$

$$\frac{ab}{c}$$

تقریب

$$f = \{(-1, 1) (1, 1) (1, -1) (0, \frac{1}{1})\} \quad g = \{(1, 1) (1, 1) (-1, -1) (0, 0)\}$$

$$\frac{rg}{f+g} \rightarrow \{(-1, \frac{1}{-1}) (1, \frac{1}{1}) (1, \frac{1}{1})\} \quad R_{rg} = \{1, 1, 1\}$$

$$a = -1 = d$$

$$c = a - 2b \Rightarrow c = -1 + 4 = 3 = c$$

$$d + c = -1 + 3 = 2$$

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

$$-y^r + x - m \geq 0 \Rightarrow x^r - x + m \leq 0$$

$$\frac{a+b=-1}{ab=m}$$

$$r(x-c)^r = (x-c)(rx+a)$$

$$\Rightarrow r(x-c) = rx + a \Rightarrow rx - rc = rx + a \Rightarrow a = -rc$$

$$rx^r + rx + rb = rx^r + ax - rcx - ca$$

$$a + b + c = 4 - c + 9 = 13$$

$$1rx + rb = rx + ca$$

$$rb = -ca \Rightarrow rb = 1 \wedge = 2$$

$$1a = 1 \Rightarrow a = 1 \Rightarrow c = -3 \Rightarrow b = 9$$