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تدابع و خواص آن ها

حاجز دهم دفتر A

سنت پیش خرابی

$$A = \{1, 2, 3\} \quad B = \{2, 3\} \quad A \times B - B' = \emptyset$$

①

$$(B' = B \times B)$$

$$\{(1, 2) (1, 3) (2, 2) (2, 3) (3, 2) (3, 3)\} - \{(2, 2) (2, 3) (3, 3) (3, 2)\} \\ = \{(1, 2) (1, 3)\} \leftarrow$$

② مقدار m تابع بودن

$$f(x) = \{(x, m^2), (2, 1), (-3, m), (-2, m), (3, m+2), (m, 4)\}$$

$$m^2 - m - 2 = 0$$

$$m = -1 \text{ OR } m = 2 \quad \text{خ ت و د}$$

②

$$g(x) = \{(x, m^2), (2, 1), (m, 4), (3, m+2), (-2, m), (-1, 3)\}$$

$$m^2 - m - 2 = 0$$

$$m = -1 \text{ OR } m = 2$$

$$m = \text{شرف نشا}$$

به مقدار هیچ m تابع نیست!

$$a \times b = 5$$

③

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

$$ax + b \quad 1 \leq x \leq 2$$

$$x^2 \quad x \geq 2$$

$$a + b = 0 \rightarrow a = -b \quad b = -1$$

$$\Delta = 2a + b \quad a = 1$$

④

$$a \times b = -48 \leftarrow$$

$$f(x) = \begin{cases} 2x - 3 & x \geq k \\ 1 - 3x & x < k \end{cases}$$

$$2k - 3 = 1 - 3k$$

$$\Delta k = 5$$

$$k = \frac{4}{5}$$

(4)

(2)

$$f(x) = \begin{cases} -x + 2 & x > 1 \\ -x & -1 \leq x < 1 \\ x - 1 & x < -1 \end{cases}$$

x	1	2	3
y	1	0	-1
x	-1	0	1
y	1	0	-1
x	-1	-2	-3
y	-2	-3	-4

شکل تابع؟

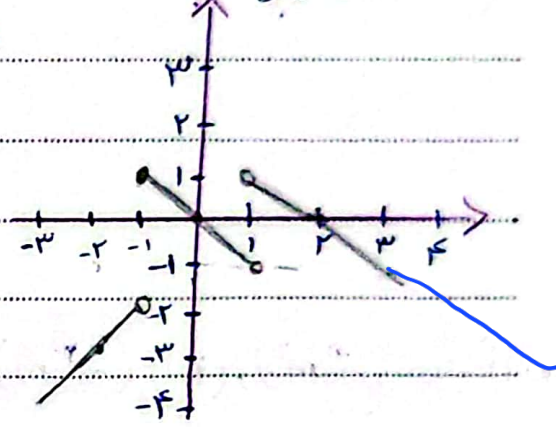
(5)

دامنه و برد؟

$$D_f = (-\infty, 1) \cup (1, +\infty)$$

$$R_f = (-\infty, -2) \cup (-1, 1]$$

$$R_f = (-\infty, 1]$$



$$2y^3 + x^2 + 1 = 0 \quad \text{الف)}$$

تابع است

(6)

$$x^2 + 4y^2 - 2x - 12y + 10 = 0 \quad \text{ب)}$$

$$(x-1)^2 + 4(y-\frac{3}{2})^2 = 0$$

$$(1, \frac{3}{2})$$

تابع نیست

(1)

$$(\frac{3}{2})$$

$$\lim_{x \rightarrow \infty} \sin y = y \sin x \quad \frac{0}{0} \quad 0 = y \times 0 \quad 0 = 0$$

(7)

تابع نیست ب) اما مقعر به فرمیل نی کنه

تابع نیست!

$$\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = 2$$

(2)

$$2x = \frac{x}{y} + \frac{y}{x} + 2$$

$$2yx = x^2 + y^2 \rightarrow 0 = (x-y)^2 \rightarrow x=y$$

تابع است

