

Date:

۱۸، ۷۵

Sub:

(دوازدهم دختر A)

زهرامری

①

$$\text{الف)} y^3 = 2x^2 + 2x - 1 \rightarrow y^3 + 3 = 2(x^2 + x + 1)$$

تابع است ✓

می توان فرد دارد یعنی توانا تر نیست از یک ریشه دهد به ازای مقدار معینی از x .

$x > 0 \rightarrow \text{همواره مثبت}$

②

$$\text{ب)} x \cos y = y \cos x \xrightarrow{\text{تابع نیست}} \text{اگر } x = \frac{\pi}{2} \rightarrow \frac{\pi}{2} \cos y = y \cos \frac{\pi}{2}$$

$$y \in \left[k\pi + \frac{\pi}{2} \right] \leftarrow \cos y = 0 \leftarrow$$

$$\text{ج)} \frac{x+y}{2} = \sqrt{xy} \quad x, y > 0$$

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

تابع است ✓

$$> \text{د)} xy^2 + 2x - y^3 - 2y = 0$$

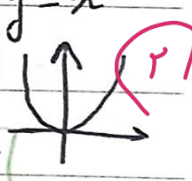
$$x(y^2 + 2) - y(y^2 + 2) = 0 \rightarrow (y^2 + 2)(x - y) = 0 \rightarrow x = y$$

تابع است ✓

②

$$\text{الف)} x^2 = 2y - |y| \rightarrow \begin{cases} x^2 = y & y \geq 0 \\ x^2 = 3y & y < 0 \end{cases}$$

تابع است ✓



$$\text{ب)} [y] = 1 - [x] \xrightarrow{x=4} [y] = -3 \rightarrow y \in [-3, -2)$$

تابع نیست ✓

③

$$2x(3)^2 - b = a + 2x^3$$

$$\left| \frac{3}{2} - 1 \right| \geq 2 \quad \text{②}$$

$$\rightarrow 18 - b = 9 + a \rightarrow a + b = 12 \quad \checkmark$$

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(K)

$$-x^2 - bx + a \geq 0 \rightarrow$$

(2)

$$\begin{array}{l} \xrightarrow{\frac{a}{-1} = ab} \boxed{b = -1} \quad \frac{-(-b)}{-1} = a + b \\ \boxed{a + b = 1} \checkmark \quad \boxed{a = 2} \quad \leftarrow \frac{-1}{-1} = a - 1 \end{array}$$

(A)

$$a = 0, b \neq 0 \rightarrow 2b + c = 0 \rightarrow c = -2b$$

(2)

$$\frac{3a}{0} + \frac{c}{-2b} - \frac{3|b|}{+2b} = \boxed{b} \checkmark \rightarrow \frac{b}{b} \quad \text{بحسب } b \text{ ضربیم}$$

(4)

$$\sqrt{\frac{(3+a)x + ab + 2}{x+b}} \rightarrow \frac{(3+a)x + ab + 2}{x+b} \geq 0$$

(2)

$$\frac{-3b + 2}{x+b} \geq 0 \rightarrow \boxed{b = -2} \checkmark$$

$$\boxed{a = -3} \leftarrow \text{بخط دانه}$$

$$(V) \text{ الف } x(n+1)(n-1) \geq 0 \rightarrow \frac{-1}{-1} \frac{0}{0} \frac{1}{1} \rightarrow x \in [-1, 0] \cup [1, +\infty) \checkmark$$

$$(ب) |x| - 1 > 0 \rightarrow |x| > 1 \rightarrow x > 1 \text{ یا } x < -1$$

(2)

$$\boxed{x \in (-\infty, -1) \cup (1, +\infty)} \checkmark$$

الف

$$(A) |x| - [n] \neq 0 \quad |x| \neq [n]$$

$$\rightarrow x \notin \{K \mid K \in \mathbb{W}\} \checkmark$$

(1)

اعداد حسابی

$$\text{ب } \sqrt{x} + \sqrt{y} = 9 \rightarrow \begin{cases} x \geq 0 \\ \sqrt{y} = 9 - \sqrt{x} \end{cases} \xrightarrow{y \geq 0} 0 \leq x \leq 81$$

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$$\textcircled{9} \quad \left[2x - \frac{1}{r} \right] + \left[2x + \frac{3}{r} \right] \geq 0 \rightarrow 2 \left[2x + \frac{3}{r} \right] - 2 \geq 0 \quad (1, V2)$$

$\uparrow +2-2$ $\left[2x + \frac{3}{r} \right] \geq 1$ $\leftarrow$

$$2x \geq +\frac{1}{r} \rightarrow \boxed{x \geq +\frac{1}{r}} \quad \leftarrow$$

(مفاتيح!)

$$\textcircled{10} \quad 2x - a > 0 \rightarrow x > \frac{a}{r} \quad , \quad \log 2x - a \leq 1 \rightarrow 2x - a \leq 10 \quad (2)$$

$\frac{10+a-a}{r} = x \quad \checkmark \quad \left(\frac{a}{r} , \frac{10+a}{r} \right] \quad x \leq \frac{10+a}{r} \quad \leftarrow$