

۲۰

آنها را بررسی کرده - تطبیق ۱ - دوازدهم فصل B

الف) $y_1^p = r_{x_1}^r + r_{x_1+1}$ $\xrightarrow{x_1=x_2}$ $y_1^p = y_2^p \rightarrow y_1 = y_2$ ✓ تابع (۲)

$y_2^p = r_{x_2}^r + r_{x_2+1}$

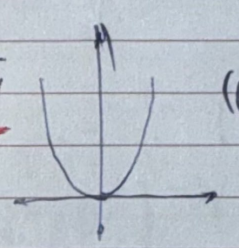
ب) $x \cos y = y \cos x$ $\xrightarrow{\text{مثال نقض}}$ $x = \frac{\pi}{2} \rightarrow \frac{\pi}{2} \cos y = y \cos \frac{\pi}{2} \rightarrow \frac{\pi}{2} \cos y = y \times 0$ ✓

$\rightarrow \frac{\pi}{2} \cos y = 0 \rightarrow \cos y = 0 \rightarrow y = 0, \pi, 2\pi, \dots$ تابع x

ج) $\frac{x+y}{2} = \sqrt{xy} \rightarrow x+y - 2\sqrt{xy} = 0 \rightarrow (\sqrt{x} - \sqrt{y})^2 = 0 \rightarrow \sqrt{x} = \sqrt{y} \rightarrow x = y$ ✓ تابع

د) $y^p - xy^r + ry - rx = 0 \rightarrow y(y^r + r) - x(y^r + r) = 0 \rightarrow \frac{y(y^r + r)}{y^r + r} = x \rightarrow y = x$ ✓ تابع

هـ) $|y| + x^r = ry \xrightarrow{\sqrt{y} > 0} x^r = ry - |y| \rightarrow x^r = y$ ✓ تابع (سوال ۲) (۲)



ب) $[y], [x] = 1 \xrightarrow{x=1} y \in [0, 1)$ ✓

ف) $f(x) = \begin{cases} rx^r - b & x \geq r \\ a + rx & 0 \leq x \leq r \\ rx^r - b & x \leq -1 \end{cases}$ $\rightarrow x = r \rightarrow rx - b = a + r$ (سوال ۳) (۲)

$\hookrightarrow a + b = 1r$ ✓

$$rb^r = a$$

②

$$L_{sb} = -19 \frac{1}{E}$$

$b \in \mathbb{Z}$

$$\frac{1}{f} \rightarrow b = \frac{1}{f} \rightarrow a = \frac{1}{f} \quad [a, b]_A$$

□ If $b = -1 \rightarrow a = 1$ ✓ ✓

سوال (۵)

$$\rightarrow r_b + c = 0 \rightarrow r_b = -c \checkmark \rightarrow 0 - r_b - r(-b)$$

h → b ✓

سوال ۱

$$x+b > 0 \rightarrow x > -b \rightarrow -b = -1$$

$$\hookrightarrow \underline{b = -1} \checkmark$$

$$\begin{array}{r} -101 \\ - \overline{) 1111} \\ \underline{0000} \end{array}$$

①

ب) $y = \frac{1}{\sqrt{|x|-1}} \rightarrow |x| > 1 \rightarrow \begin{matrix} x > 1 \\ x < -1 \end{matrix} \Rightarrow \text{Dy} = \mathbb{R} - [-1, 1]$ ✓

$$c1) = y = \sqrt[3]{\frac{1}{|x| - [x]}} \quad |x| + [x] \xrightarrow{x \geq 0} x + [x] \rightarrow x + \text{عدد صحيح} = W \quad (\text{سؤال})$$

$$\downarrow -x + [x] \quad \Rightarrow Dy = \mathbb{R}^+ - W \quad \checkmark \quad (r)$$

$$b) \sqrt{x} + \sqrt{y} = 9 \rightarrow \sqrt{y} = 9 - \sqrt{x} \rightarrow \sqrt{y} \geq 0 \quad \Rightarrow Dy = [0, 9] \quad \checkmark$$

$$9 - \sqrt{x} \geq 0 \rightarrow 9 \geq \sqrt{x} \rightarrow 81 \geq x$$

$$y = \frac{1}{\sqrt{[x - \frac{1}{r}] + [x + \frac{r}{r}]}} \quad [x - \frac{1}{r}] + [x + \frac{r}{r}] > 0 \quad (\text{سؤال})$$

$$r[x - \frac{1}{r}] + r > 0 \rightarrow [x - \frac{1}{r}] > -1$$

$$0 \leq [x - \frac{1}{r}] \rightarrow \frac{1}{r} \leq x \rightarrow \frac{1}{r} \leq x \rightarrow Dy = [\frac{1}{r}, +\infty) \quad \checkmark$$

$$y = \sqrt{1 - \log(x-a)} \quad x-a > 0 \rightarrow x > \frac{a}{r} \Rightarrow \frac{a}{r} = b \quad (\text{سؤال})$$

$$1 - \log(x-a) \geq 0 \rightarrow \log(x-a) \leq 1 \rightarrow x-a \leq 10$$

$$x \leq 10+a \rightarrow x \leq \frac{10+a}{r} \quad \frac{10+a}{r} = c$$

$$c - b = \frac{10+a}{r} - \frac{a}{r} = \boxed{10} \quad \checkmark$$