

الف) $\begin{cases} x_1^2 = 2x_1 + 2x_1 - 1 \\ x_1^2 = 2x_1 + 2x_1 - 1 \end{cases} \xrightarrow{x_1 = 2x_1} x_1^2 = x_1^2 \rightarrow x_1 = x_1$ هست ✓

ب) $x = \frac{2}{3} \rightarrow \cos x = 0 \rightarrow x \cos x = x \cos 0$ نیست ✗
 $x = \frac{2}{3} \rightarrow \frac{2}{3} \cos \frac{2}{3}$

ج) $x + x = 2\sqrt{x}$
 قیاس $\rightarrow x^2 + x^2 + 2x = 4x \rightarrow x^2 + x^2 - 2x = 0$
 $(x+x)^2 = 0 \rightarrow x = x$ هست ✓

د) $x^2 + x = x^2 + x$
 $x(x^2 + 1) = x(x^2 + 1) \rightarrow x = x \rightarrow$ هست ✓

انف) $x = 0 \rightarrow |x| = 2x \rightarrow x^2 = 4x^2 \rightarrow 4x^2 - x^2 = 0 \rightarrow 3x^2 = 0$
 $x = 0$ هست ✓

ب) $x = 0 \rightarrow [x] = 1 \rightarrow x = 1, 2, 3, \dots$ نیست ✗

$|x-1| \geq 2 \rightarrow x-1 \geq 2 \rightarrow x \geq 3$
 $x-1 \leq -2 \rightarrow x \leq -1$
 $2x-b = a+2x$
 $2(-1)-b = a+2 \rightarrow a+b = -1$

$-x-bx+a \rightarrow a=ab \rightarrow b=1$
 $-b=a+b \rightarrow a=-2b \rightarrow a=-2$ } $a+b = -1$

عبارت زیر را در یک خط بوز، است و درجه درستی چون! درجه به شکل باز، این نتیجه برداشت می شود. $a=0$

$\begin{cases} 2b+c=0 \\ b+c>0 \\ c>0 \end{cases} \Rightarrow \begin{cases} 3a+c-2(-b) = 3a+2b+c \\ \Rightarrow b \end{cases}$

$\hookrightarrow b(0)+c>0$

$\frac{3x+2+2a+c+ab}{x+b} \geq 0$
 $x \neq -b \rightarrow b = -2$
 $\hookrightarrow M = -b$

الف) $x^2 - x \rightarrow x(x^2 - 1) \rightarrow \frac{-1+1}{-1+1+1}$
 $D_f = [-1, 0] \cup [1, +\infty)$

ب) $|x-1| > 0 \rightarrow |x| > 1 \rightarrow \begin{cases} x > 1 \\ x < -1 \end{cases}$

$$|x| \neq [\infty] \rightarrow R^{-1} \cup (R^T - W) = D_f \quad (w)$$

$$b) \sqrt{x} \rightarrow x \geq 0, \sqrt{x} = 9 - \sqrt{x} \rightarrow 9 \geq \sqrt{x} \rightarrow |1| \geq x \Rightarrow 0 \leq x \leq 11$$

$$[2x - \frac{1}{p}] + [2x + 2 - \frac{1}{p}] > 0 \rightarrow 2[2x - \frac{1}{p}] > -2 \rightarrow [2x - \frac{1}{p}] > -1$$

$$x > \frac{1}{p} \leftarrow 2x > \frac{1}{p} \leftarrow 2x - \frac{1}{p} > 0 \leftarrow$$

$$1 \geq \log_{10} \frac{2x-a}{10} \rightarrow 10 \geq 2x-a \rightarrow 10+a \geq 2x$$

$$2x-a > 0 \rightarrow 2x > a$$

$$\left. \begin{array}{l} 0 < 2x-a \leq 10 \\ \frac{a}{2} < x \leq \frac{a+10}{2} \end{array} \right\}$$

$$c = \frac{a+10}{2}, b = \frac{a}{2} \leftarrow \left(\frac{a}{2}, \frac{a+10}{2} \right] \leftarrow$$

$$c - b = \omega$$