

نقطه ای تابع است
 $y^3 - x = 2x^2 \Rightarrow y^3 = 2x^2 + x \Rightarrow y = \sqrt[3]{2x^2 + x}$

تابع نیست
 $|y| + x^2 = x + 3 \Rightarrow |y| = x + 3 - x^2 \Rightarrow y = \pm(x + 3 - x^2)$

تابع است
 $\sqrt{x-4} + |y-2| = 0 \rightarrow x=4, y=2$

تابع است
 $\cos y = x$

الف) $\frac{-4}{+} \frac{1}{-} \frac{1}{+} \quad (-\infty, -4] \cup (1, +\infty)$

ب) $\frac{-4}{-} \frac{-1}{+} \frac{1}{+} \quad [-4, -1) \cup (1, +\infty)$

ج) $\Delta = 1^2 - 4 \times 4 = 1 - 16 = -15 \rightarrow$ بیرون می آید $D = \mathbb{R}$

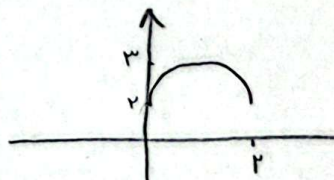
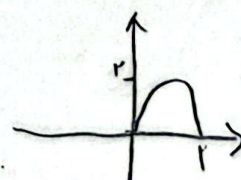
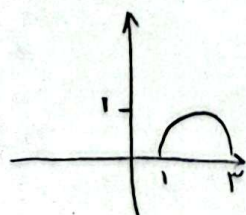
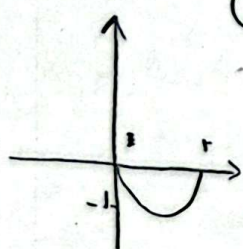
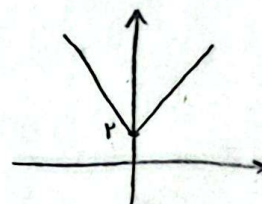
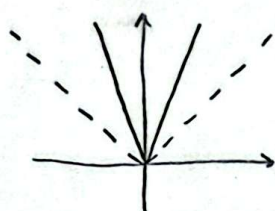
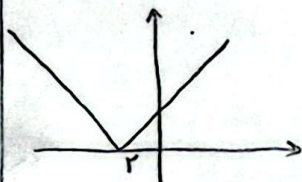
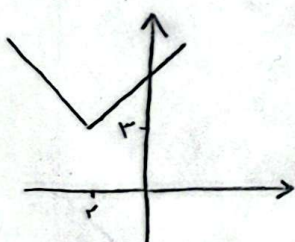
الف) $\sqrt{x-2} + \sqrt{x-4} \rightarrow \begin{cases} x-2 \geq 0 \rightarrow x \geq 2 \\ x-4 \geq 0 \rightarrow x \geq 4 \end{cases}$

ب) $y = \frac{x^2+1}{x^2+1} \rightarrow$ ثابت $\mathbb{R} =$ دامنه

ج) $y = \sqrt{x-2} \rightarrow x-2 \geq 0 \rightarrow x \geq 2$
 $x-4 \rightarrow x=4$

ب) $y = \frac{2x+3}{12x+21} \rightarrow$ مزخ می شود
 $\mathbb{R} =$ دامنه

$[2, +\infty)$



$$\text{الف) } \frac{x}{p} \mid \begin{array}{c} r \\ -\phi + \phi - \phi + \end{array}$$

$$\text{ب) } \frac{x}{p} \mid \begin{array}{c} r \\ -\phi + \phi - \phi + \end{array}$$

$$\text{الف) } \frac{x}{p} \mid \begin{array}{c} r \\ -\phi + \phi - \phi + \end{array}$$

$$\text{ب) } \frac{x}{p} \mid \begin{array}{c} r \\ -\phi + \phi - \phi + \end{array}$$

$$\text{الف) } y = \frac{x^r - rx + r}{x - r} \rightarrow x = -r$$

$$\frac{-r}{+ \phi - \phi +}$$

$$\text{ب) } y = \frac{x^r - rx + r}{x^r - rx + r} \rightarrow 1$$

$$\frac{*}{+ \mid +}$$

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

$$\frac{-1 \quad 0 \quad +1}{- \phi + \phi - \phi +}$$

$$\text{ب) } \frac{x^r + rx + r}{x^r + rx + r} \rightarrow + \rightarrow +$$

$$\text{الف) } \left. \begin{array}{l} \sqrt{\frac{x^r - 1}{x^r - x}} \rightarrow x^r - 1 \geq 0 \rightarrow x^r \geq 1 \Rightarrow x \geq 1 \\ x^r - x \rightarrow x^r - x \geq 0 \rightarrow x^r \geq x \rightarrow x \geq 0 \end{array} \right\} x \geq 1$$

$$\text{ب) } \left. \begin{array}{l} \sqrt{\frac{x^r - 14}{x^r - 3x + 4}} \rightarrow x^r - 14 \geq 0 \rightarrow x^r \geq 14 \rightarrow x \geq 14 \\ x^r - 3x + 4 \rightarrow (x-1)(x-4) \rightarrow \left. \begin{array}{l} x \geq 1 \\ x \geq 4 \end{array} \right\} x \geq 4 \end{array} \right\} x \geq 14$$