

تابع است $\left[\begin{matrix} x_1^3 - 2x_1^2 + 1 = 0 \\ x_2^3 - 2x_2^2 + 1 = 0 \end{matrix} \right] \rightarrow x_1^3 = 2x_1^2 - 1 \rightarrow x_2^3 = 2x_2^2 - 1$ (الف)

همداره مشت $\left[\begin{matrix} 3x_1^2 - 4x_1 = 0 \\ 3x_2^2 - 4x_2 = 0 \end{matrix} \right] \rightarrow x_1^2(3 - \frac{4}{x_1}) = 0 \rightarrow x_1 = 0 \text{ یا } x_1 = \frac{4}{3}$

تابع است؟ نیست! $\left[\begin{matrix} x_1^3 - 2x_1^2 + 1 = 0 \\ x_2^3 - 2x_2^2 + 1 = 0 \end{matrix} \right] \rightarrow x_1^3 - 2x_1^2 + 1 = 0 \rightarrow x_2^3 - 2x_2^2 + 1 = 0$

تابع است $\left[\begin{matrix} x_1^3 - 2x_1^2 + 1 = 0 \\ x_2^3 - 2x_2^2 + 1 = 0 \end{matrix} \right] \rightarrow x_1^3 - 2x_1^2 + 1 = 0 \rightarrow x_2^3 - 2x_2^2 + 1 = 0$

(الف) $y = x^2 - 1$ 

همان اول مثل من میزدی $\left[\begin{matrix} x_1^3 + x_2^3 = 2x_1 - 1 \\ x_1^3 + x_2^3 = 2x_2 - 1 \end{matrix} \right] \rightarrow x_1^3 + x_2^3 = 2x_1 - 1 \rightarrow x_1^3 + x_2^3 = 2x_2 - 1$

تابع نیست $\left[\begin{matrix} x_1^3 + x_2^3 = 2x_1 - 1 \\ x_1^3 + x_2^3 = 2x_2 - 1 \end{matrix} \right] \rightarrow x_1^3 + x_2^3 = 2x_1 - 1 \rightarrow x_1^3 + x_2^3 = 2x_2 - 1$

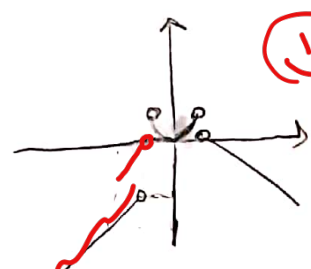
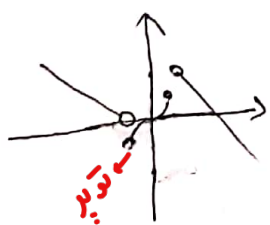
$\left[\begin{matrix} x_1^3 + x_2^3 = 2x_1 - 1 \\ x_1^3 + x_2^3 = 2x_2 - 1 \end{matrix} \right] \rightarrow x_1^3 + x_2^3 = 2x_1 - 1 \rightarrow x_1^3 + x_2^3 = 2x_2 - 1$

$\left[\begin{matrix} \sqrt{x_1} + \sqrt{x_2} = 2 \\ \sqrt{x_1} + \sqrt{x_2} = 2 \end{matrix} \right] \rightarrow \sqrt{x_1} + \sqrt{x_2} = 2 \rightarrow \sqrt{x_1} + \sqrt{x_2} = 2$

(الف) $\tan \frac{\pi}{3} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$ $\cos \frac{\pi}{6} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$ $\tan 45^\circ = \frac{1}{1} = 1$ $\cos 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

$\cos 180^\circ = -1 \rightarrow$ معرف نه $\times$

(الف) $\sin \alpha = \frac{1}{\sqrt{2}} \rightarrow 45^\circ, 135^\circ$ $\cos \alpha = \frac{\sqrt{2}}{2} = 45^\circ, 135^\circ$



(الف) $y = (x-2)(x-3)(x-4)$

$\frac{2}{-} \frac{3}{+} \frac{4}{-}$

$y = (x-2)(x-3)(x-4)$

$\frac{2}{+} \frac{3}{-} \frac{4}{+}$

$$\text{الف) } y = \frac{(x-2)(x-4)}{x-x-3}$$

$$\begin{array}{r} 2 \quad 3 \quad 4 \\ -\phi + \phi - \phi + \end{array} \quad \checkmark$$

$$\text{ب) } \frac{(x-2)(x-4)}{(x-3)^2}$$

$$\begin{array}{r} 2 \quad 3^* \quad 4 \\ +\phi - \phi - \phi + \end{array} \quad \checkmark$$

①
②

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

$$\begin{array}{r} 1 \quad 3 \\ +\phi - \phi + \end{array}$$

داس

$$\text{ب) } \frac{x^3 - 3x + 2}{x^2 - 5x + 3} = \frac{(x-1)(x-2)}{(x-1)(x-3)}$$

$$\begin{array}{r} 1 \quad 2 \quad 3 \\ +\phi + \phi - \phi + \end{array} \quad \checkmark$$

③
④

$$\text{الف) } y = \frac{x^4 - x^2}{x^2 + x + 2} \rightarrow x^2(x^2 - 1) \rightarrow \pm 1, 0$$

$$\begin{array}{r} -1 \quad 1 \\ -\phi + \phi - \phi + \end{array}$$

مضاعف

$$\text{ب) } \frac{x^2 + 4x + 4}{x^2 + 2x + 3} = \frac{(x+2)^2}{(x+3)(x+1)}$$

$$\begin{array}{r} + \quad - \\ -\phi + \phi - \phi + \end{array} \quad \checkmark$$

⑤
⑥
1, 2, 5

الفنا) $y = \frac{x^3 - 3x + 2}{x - 3}$

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

$\xrightarrow{+2}$
 $\hookrightarrow 3$

3 و -2 ریشه ها

