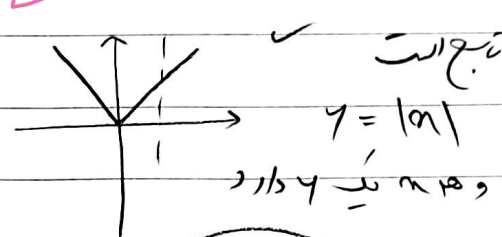
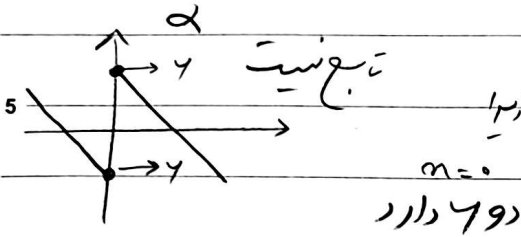


(2)



الف) $y = \sqrt{m+1}$ $\xrightarrow{\text{میشود}} m = -1 \Rightarrow y = 0$
 $m = 3 \Rightarrow y = 2$ $\left(-\sqrt{4} \right)$ \leftarrow تبعیت

(3)

ب) $m = \frac{y}{\sqrt{1-y^2}}$

$y = \sqrt{1-y^2}$

$y^2 = 1 - y^2$

$2y^2 = 1 \Rightarrow y^2 = \frac{1}{2} \Rightarrow y = \pm \frac{1}{\sqrt{2}}$

به ازای $y = \frac{\sqrt{2}}{2}$ حاصل عبارت منفی است!

(4)

15) $|y| = m \xrightarrow{\text{میشود}} m = 1 \Rightarrow y = \pm 1$ \leftarrow تبعیت

(5)

ب) $y^3 + 3y^2 + 3y + m^3 + m = 0 \Rightarrow (y+1)^3 = 1 - m^3 - m$

$(y+1)^3 - 1$

$(y+1)^3 = 1 - m(m^2 + 1)$

$\xrightarrow{\text{میشود}} m = 1 \Rightarrow (y+1)^3 = 1 - 1(2) \Rightarrow y+1 = -1$

$m = -1 \Rightarrow (y+1)^3 = 1 + 1(2) \Rightarrow y+1 = \sqrt[3]{3} \Rightarrow y = \sqrt[3]{3} - 1$

$m = 0 \Rightarrow (y+1)^3 = 1 \Rightarrow y+1 = 1$

$y = 0$

\leftarrow تبعیت

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①

$$f(m) = \frac{m^r + \xi m + \nu - r}{m^r + \xi m + \nu} \quad (V)$$

$$1 + \frac{-r}{m^r + \xi m + \nu} = f(m) \xrightarrow{m = \sqrt{r-r}} 1 + \frac{-r}{(\sqrt{r-r})^r + \xi(\sqrt{r-r}) + \nu}$$

$$\Rightarrow 1 + \frac{-r}{r + \xi - \xi r + \xi r - r + \nu} = 1 - \frac{r}{\nu} = 1 - \frac{r}{r} = \frac{r}{r} \quad (P)$$

5

$$r + r m + a(-1) - \xi + r + m = \dots \rightarrow a = 1 \quad (A)$$

$$f(m) = m^r + m + b(-1) \rightarrow -1 + b = -r \rightarrow b = -r$$

$$r m - 1 = a^r + m - r \rightarrow m^r - r m - 1 = 0 \quad \text{بفرض } m = 1 \rightarrow (m+1)(m^r - m - 1)$$

$$\textcircled{1} = \frac{r}{r} \leftarrow \frac{1 + \sqrt{1 + \xi}}{1 - \sqrt{1 + \xi}} \rightarrow \frac{1 + \sqrt{1 + \xi}}{r}$$

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$$a + b = r a \rightarrow a = b \quad (9)$$

$$r a = a - r b + 1 \rightarrow r a = -a + 1 \rightarrow r a = 1 \quad a = \frac{1}{r} \quad (P)$$

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$$\frac{\xi m^r - a m + c + 1}{b m + r} = m \rightarrow \xi m^r - a m + c + 1 = b m^r + r m + 1$$

$$\begin{cases} b = \xi \\ a = -r \\ c = -1 \end{cases}$$

$$a + b + c = 0 \quad (P)$$

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$$x = \frac{y}{\sqrt{1-y^2}} \rightarrow \frac{y_1}{\sqrt{1-y_1^2}} = \frac{y_2}{\sqrt{1-y_2^2}} \rightarrow \frac{y_1^2}{1-y_1^2} = \frac{y_2^2}{1-y_2^2} \quad \underline{5}$$

$$\leadsto y_1^2 - \cancel{y_1^2 y_2^2} = y_2^2 - \cancel{y_1^2 y_2^2} \quad \underbrace{y_1, y_2}_{\text{هم علامت}} \rightarrow y_1 = y_2 \rightarrow \checkmark \text{ راجعاً تا برسیتم}$$