

نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۴ ..... کلاس ..... هم ..... پایه ..... جا .....

$$\text{الف) } \rightarrow \begin{cases} y_1^3 = 2\mu_1^2 - 1 \\ y_2^3 = 2\mu_2^2 - 1 \end{cases} \xrightarrow{\mu_1^2 = \mu_2^2} y_1^3 = y_2^3 \rightarrow y_1 = y_2$$

$$\text{ب) } \rightarrow \begin{cases} y_1^3 + y_1 = 3\mu_1^2 - 1 \rightarrow 2y_1^3 = 3\mu_1^2 - 1 \\ y_2^3 + y_2 = 3\mu_2^2 - 1 \rightarrow 2y_2^3 = 3\mu_2^2 - 1 \end{cases} \xrightarrow{\mu_1^2 = \mu_2^2} 2y_1^3 = 2y_2^3 \rightarrow y_1 = y_2$$

سوال ۱۲

$$\text{الف) } \rightarrow \begin{cases} y_1 = x_1^2 - 1 \\ y_2 = x_2^2 - 1 \end{cases} \xrightarrow{x_1^2 = x_2^2} y_2 = y_1 \quad \checkmark$$

$$\text{ب) } \xrightarrow{x=0} |y|=1 \begin{cases} \nearrow y=1 \\ \searrow -y=1 \rightarrow y=-1 \end{cases} \quad \times$$

$$\text{ج) } \rightarrow \begin{cases} y_1^3 + x_1^3 = 2x_1 - 1 \rightarrow x_1^3 - 1 = y_1^3 \\ y_2^3 + x_2^3 = 2x_2 - 1 \rightarrow x_2^3 - 1 = y_2^3 \end{cases} \xrightarrow{x_1^3 = x_2^3} y_1 = y_2$$

$$\text{د) } \rightarrow \begin{cases} \sqrt[3]{y_1} = -\sqrt[3]{x_1} + 2 \\ \sqrt[3]{y_2} = -\sqrt[3]{x_2} + 2 \end{cases} \xrightarrow{\sqrt[3]{x_1} = \sqrt[3]{x_2}} \sqrt[3]{y_1} = \sqrt[3]{y_2} \Rightarrow y_1 = y_2$$

$$\text{الف) } \frac{\sin \theta_0}{\cos \theta_0} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$$

$$\text{ب) } \frac{-1}{0} \quad \text{تمريف نشود x}$$

$$\text{ج) } \frac{\cos 315}{\sin 315} = -1$$

$$\text{د) } \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}}$$

۳

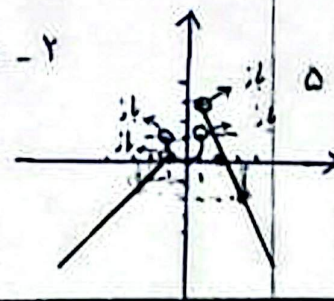
$$\text{الف) } \alpha = \frac{\pi}{4} \quad \text{ب) } \frac{5\pi}{4}$$

$$\text{ج) } \alpha = \frac{\pi}{4} \quad \text{د) } \frac{3\pi}{4}$$

۴

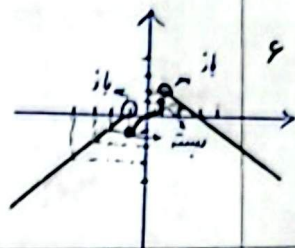
$$f(n) = \begin{cases} -2n+4 & n > 1 \\ n^2 & -1 < n < +1 \\ n+1 & n < -1 \end{cases}$$

$$\begin{array}{llll} \xrightarrow{n=1} f(n)=2 & \xrightarrow{n=2} f(n)=0 & \xrightarrow{n=3} f(n)=-2 \\ \xrightarrow{n=0} f(n)=0 & \xrightarrow{n=1} f(n)=1 & \xrightarrow{n=-1} f(n)=1 \\ \xrightarrow{n=-1} f(n)=0 & \xrightarrow{n=-2} f(n)=-1 & \xrightarrow{n=-3} f(n)=-2 \end{array}$$



۵

$$f(n) = \begin{cases} -n+3 & n > 1 \xrightarrow{n=1} f(n)=2 \xrightarrow{n=2} f(n)=1 \xrightarrow{n=3} f(n)=0 \\ n^2 & -1 < n < 1 \xrightarrow{n=-1} f(n)=-1 \xrightarrow{n=0} f(n)=0 \xrightarrow{n=1} f(n)=1 \\ -n-1 & n < -1 \xrightarrow{n=-1} f(n)=0 \xrightarrow{n=-2} f(n)=1 \xrightarrow{n=-3} f(n)=2 \end{cases}$$



الف)  $y = \underset{2^2}{(n-2)} \underset{3^2}{(n-3)} \underset{4^2}{(n-4)}$   $\frac{2 \quad 3 \quad 4}{- \quad \phi \quad + \quad \phi \quad - \quad \phi \quad +}$

ب)  $y = \underset{2^2}{(n-2)} \underset{3^2}{(n-3)} \underset{4^2}{(n-3)} \underset{5^2}{(n-4)}$   $\frac{2 \quad 3^* \quad 4}{+ \quad \phi \quad - \quad \phi \quad - \quad \phi \quad +}$

الف)  $y = \frac{\underset{2^2}{(\hat{n}-2)} \underset{4^2}{(\hat{n}-4)}}{\underset{3^2}{\hat{n}-3}}$   $\frac{2 \quad 3 \quad 4}{- \quad \phi \quad + \quad \phi \quad - \quad \phi \quad +}$

ب)  $y = \frac{\underset{2^2}{(\hat{n}-2)} \underset{4^2}{(\hat{n}-4)}}{\underset{3^2}{(\hat{n}-3)} \underset{5^2}{(\hat{n}-5)}}$   $\frac{2 \quad 3^* \quad 4}{+ \quad \phi \quad - \quad \phi \quad - \quad \phi \quad +}$

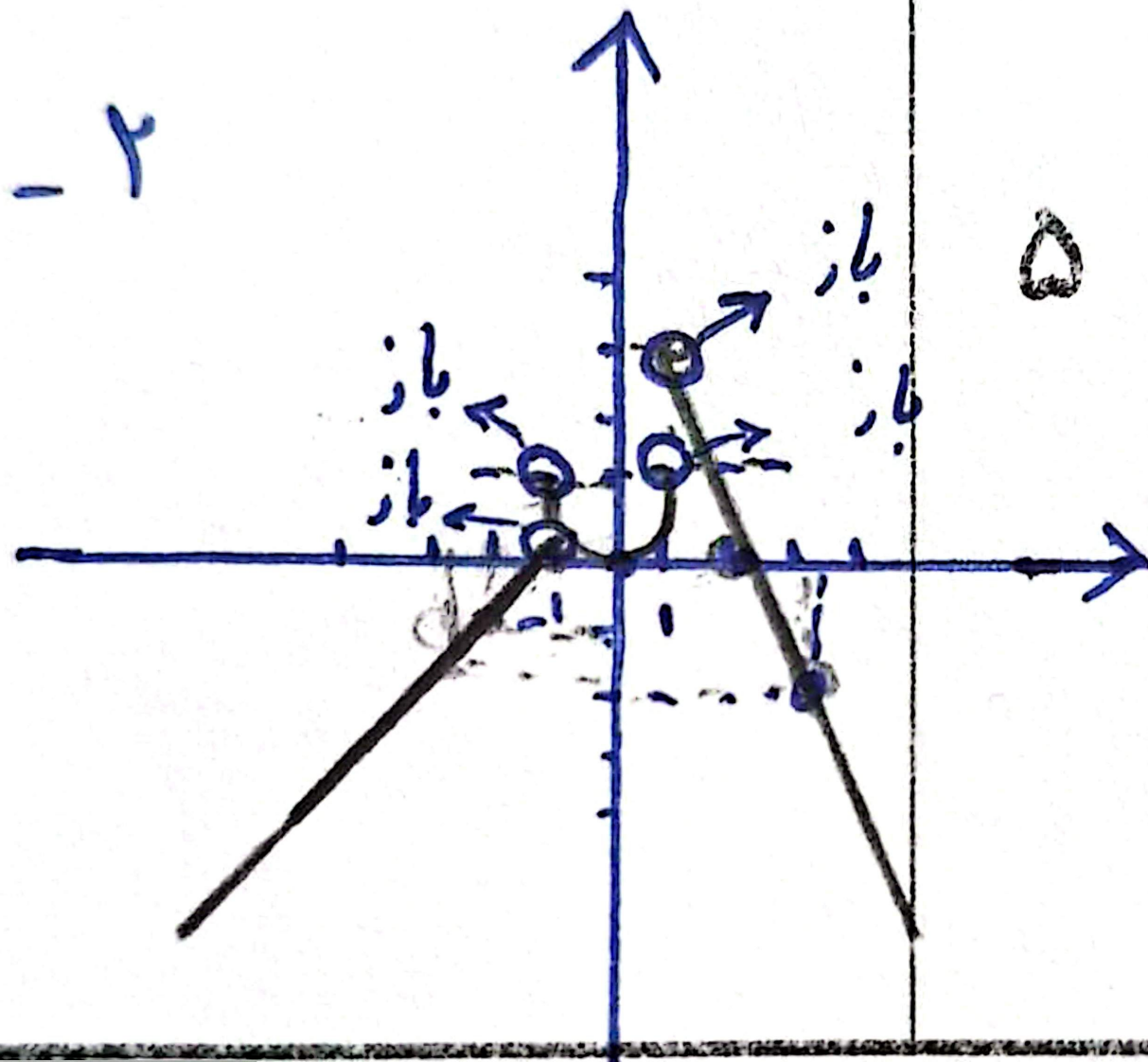
الف)  $y = \frac{\underset{2^2}{(\hat{n}-2)} \underset{1^2}{(\hat{n}-1)}}{\underset{3^2}{(\hat{n}-3)}}$   $\frac{1 \quad 2 \quad 3}{- \quad \phi \quad + \quad \phi \quad - \quad \phi \quad +}$

ب)  $y = \frac{(n-2)(n-1)}{(n-3)(n-1)}$   $\frac{1^* \quad 2 \quad 3}{+ \quad \phi \quad + \quad \phi \quad - \quad \phi \quad +}$

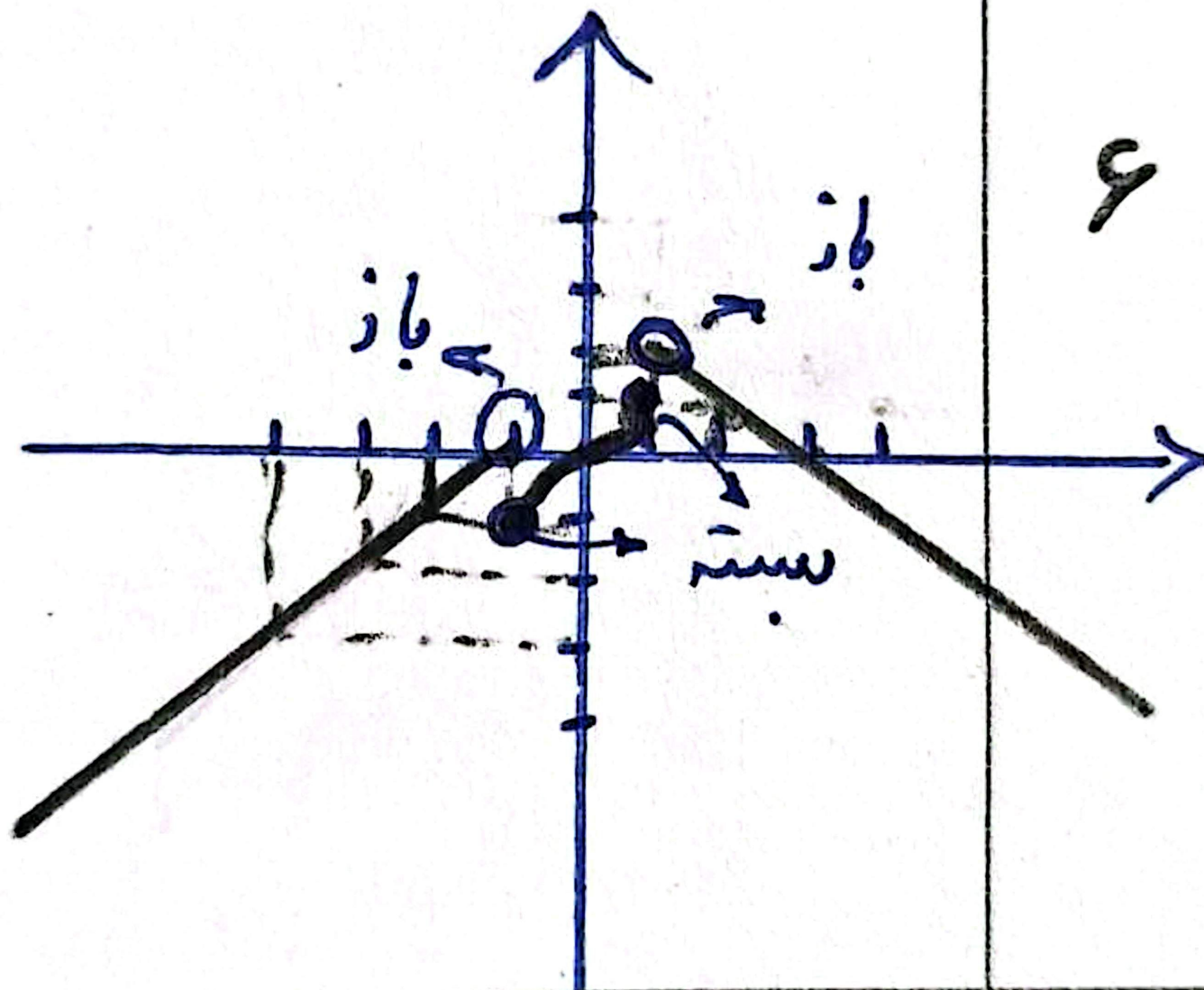
الف)  $y = \frac{n^2(n-1)(n+1)}{n^2+n+2} \rightarrow \text{دانشی}$   $\frac{-1 \quad 0^* \quad 1}{+ \quad | \quad - \quad | \quad - \quad | \quad +}$

ب)  $y = \frac{n^2+3n+4}{n^2+2n+3} \rightarrow \text{دانشی}$  (کسر صحیح نیست است)  $\frac{n^2+3n+4}{n^2+2n+3} \rightarrow \text{دانشی}$

$$= -\gamma$$



0



۶