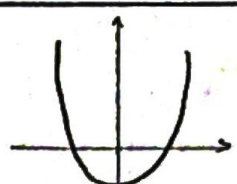
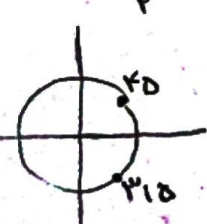
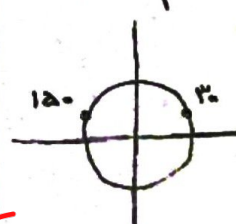
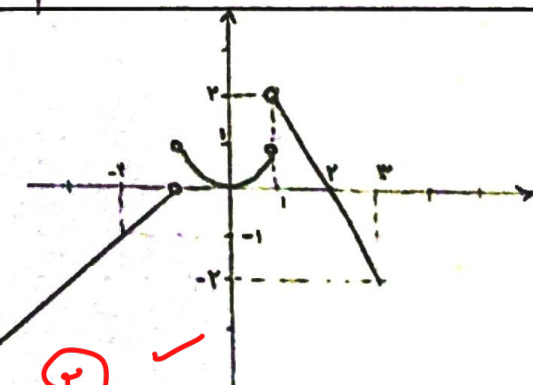
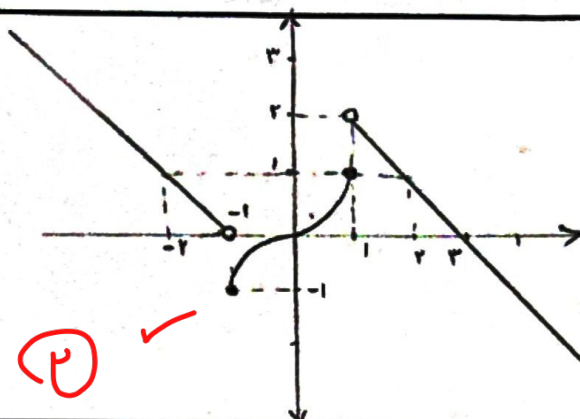
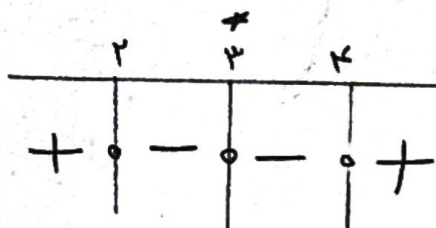


الف) $x^3 + y = 2x^2 - 1$ (ب) $\begin{cases} x_1^3 + y_1 = 2x_1^2 - 1 \\ x_2^3 + y_2 = 2x_2^2 - 1 \end{cases} \xrightarrow{x_1 = x_2}$ $x_1^3 + y_1 = x_2^3 + y_2 \rightarrow x_1^3 - x_2^3 + y_1 - y_2 = 0$ $(y_1 - y_2)(x_1^2 + x_1x_2 + x_2^2 + 1) = 0 \rightarrow \textcircled{1} y_1 = y_2$ $\textcircled{2} \rightarrow x_1^3 + x_1x_2 + x_2^3 + 1 = \Delta = \text{همیشه منفی}$	الف) $x^3 = 2x^2 - 1$ $\begin{cases} x_1^3 = 2x_1^2 - 1 \\ x_2^3 = 2x_2^2 - 1 \end{cases} \xrightarrow{x_1 = x_2} x_1^3 = x_2^3$ $\rightarrow \boxed{y_1 = y_2}$	1
الف) $x^2 + x = x^2 + 1 \xrightarrow{x=0} 1 = 1$ (ب) $x = 1, -1$ تابع نیست X	الف) $x = x^2 - 1$ تابع هست ✓ 	2
الف) $\sqrt[3]{x} + \sqrt[3]{x} = 2$ تابع هست (ب) $\begin{cases} \sqrt[3]{y_1} = 2 - \sqrt[3]{x_1} \\ \sqrt[3]{y_2} = 2 - \sqrt[3]{x_2} \end{cases} \xrightarrow{x_1 = x_2} \sqrt[3]{y_1} = \sqrt[3]{y_2}$ همیشه جواب	الف) $x^3 + x^3 = 2x - 1$ تابع هست ✓ $\begin{cases} x_1^3 + x_1^3 = 2x_1 - 1 \\ x_2^3 + x_2^3 = 2x_2 - 1 \end{cases} \xrightarrow{x_1 = x_2} x_1^3 = x_2^3$	3
الف) $\cot \frac{\sqrt{2}}{4} \rightarrow \frac{\cos}{\sin} 110^\circ$ (ب) $\rightarrow \frac{\frac{-\sqrt{2}}{2}}{\frac{1}{2}} = \textcircled{\sqrt{3}}$	الف) $\tan \frac{2}{3} \rightarrow \frac{\sin}{\cos} 40^\circ$ $\rightarrow \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \textcircled{\sqrt{3}}$	3
الف) $\cot 180^\circ \rightarrow \frac{\cos}{\sin} 180^\circ$ (ب) $\rightarrow \frac{-1}{0} \rightarrow \text{تعریف نشده}$	الف) $\tan 330^\circ \rightarrow \frac{\sin}{\cos} 330^\circ$ $\rightarrow \frac{\frac{-1}{2}}{\frac{\sqrt{3}}{2}} = \frac{-1}{\sqrt{3}} = \textcircled{\frac{-\sqrt{3}}{3}}$	3
الف) $\cos \alpha = \frac{\sqrt{2}}{2}$ (ب)  $\frac{\sqrt{2}}{4}, \frac{\sqrt{2}}{4}$	الف) $\sin \alpha = \frac{1}{\sqrt{2}}$  $\frac{\sqrt{2}}{4}, \frac{\sqrt{2}}{4}$	4
$x > 1 \rightarrow -2x + 4 \rightarrow x = 1$ $-1 < x < 1 \rightarrow x^2 \rightarrow x = 1 \rightarrow \textcircled{y=1}$ $x < -1 \rightarrow x+1 \rightarrow x = -1 \rightarrow \textcircled{y=0}$		5

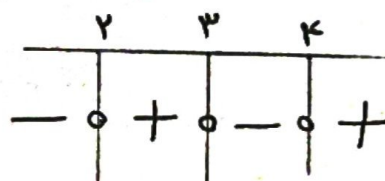
$$\begin{aligned} x > 1 &\rightarrow -x + r \rightarrow x = 1 \rightarrow y = r \\ -1 \leq x \leq 1 &\rightarrow x^r \rightarrow x = 1 \rightarrow y = 1 \\ &\quad \searrow x = -1 \rightarrow y = -1 \\ x < -1 &\rightarrow -x - 1 \rightarrow x = -1 \rightarrow y = 0 \end{aligned}$$



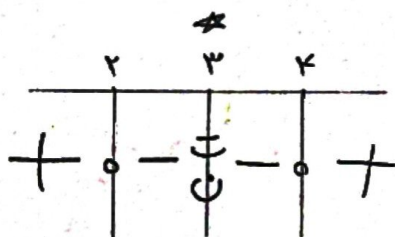
$$y = (x-2)^{\cancel{2}} (x-3)^{\cancel{2}} (x-4)^{\cancel{2}}$$



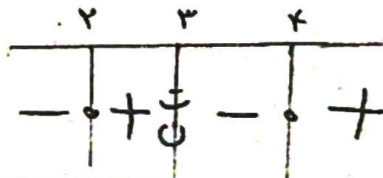
$$y = (x-2)(x-3)(x-4)$$



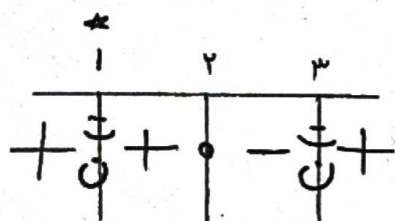
$$y = \frac{(n-2)(n-4)}{(n-3)^2}$$



$$g = \frac{(x-r)(x-r)}{x-r} \rightarrow r, r$$



$$y = \frac{x^2 - 3x + 2}{x^2 - 4x + 3} \rightarrow \frac{(x-1)(x-2)}{(x-1)(x-3)} \quad (1)$$



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

$$x^3 - 3x + 2 \rightarrow (x-1)(x+2)(x-1)$$



$$y = \frac{x^r + rx + r}{x^r + rx + r} \rightarrow \Delta = -V$$

۲) عبارت رسم حقیقی ندارد

لے این عبارت ہمارے مست ہے

$$y = \frac{x^k - x^r}{x^r + x + r} \longrightarrow \Delta = \text{متغير}$$

④ μ_{max}

