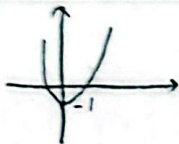
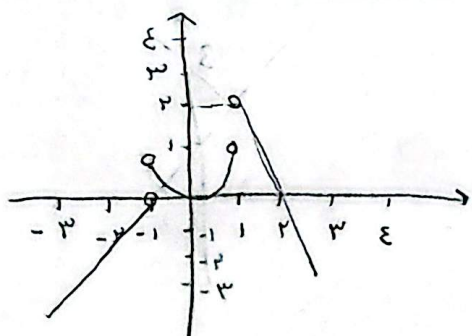
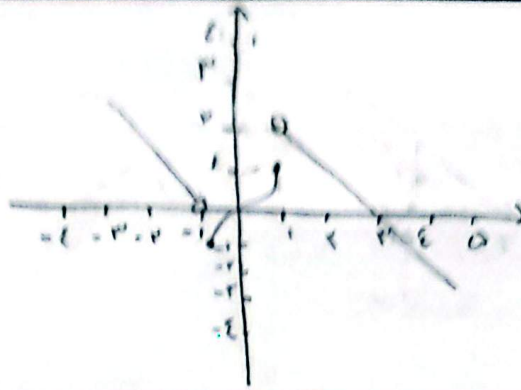


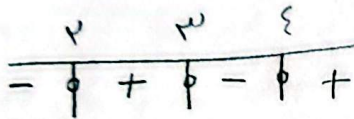
$\left. \begin{aligned} y_1''' &= 2x_1'' - 1 \\ y_2''' &= 2x_2'' - 1 \end{aligned} \right\} \begin{aligned} x_1 &= x_2 \\ y_1''' &= y_2''' \end{aligned}$ تابع است $y_1 = y_2$ (۲) ✓	$\left. \begin{aligned} y_1''' + y_1 &= 3x_1'' - 1 \\ y_2''' + y_2 &= 3x_2'' - 1 \end{aligned} \right\} x_1 = x_2$ $y_1''' + y_1 = y_2''' + y_2 \rightarrow y_1''' - y_2''' + y_1 - y_2 = 0$ باروش داریم $(y_1 - y_2)(y_1^2 + y_2^2 + y_1 y_2) = 0 \rightarrow y_1 - y_2 = 0$ ارزش می توانیم بگیریم $(y_1 - y_2)(y_1^2 + y_2^2 + y_1 y_2 + y_1^2 + 1) = 0 \rightarrow y_1 - y_2 = 0$	۱		
الف)  تابع است	ب) $y + x_1 y = x_1' + 1$ $x_1 = 0$ $y = \pm 1$ تابع نیست (۲) ✓	ج) $y_1''' = -x_1'' + 2x_1' - 1$ $y_2''' = -x_2'' + 2x_2' - 1$ $x_1 = x_2$ $y_1''' = y_2''' \rightarrow y_1 = y_2$ تابع است	د) $\sqrt[3]{y_1} = 2 - \sqrt[3]{x_1}$ $\sqrt[3]{y_2} = 2 - \sqrt[3]{x_2}$ $x_1 = x_2$ $\sqrt[3]{y_1} = \sqrt[3]{y_2} \rightarrow y_1 = y_2$	۲
الف) $\tan 40^\circ$ $\frac{\sin}{\cos} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$	ب) $\cot 210^\circ$ $\frac{\cos}{\sin} = \frac{-\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = \sqrt{3}$ $\sqrt{3}$	ج) $\tan 150^\circ$ $\frac{\sin}{\cos} = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$ (۲) ✓	د) $\cot 110^\circ$ $\frac{\cos}{\sin} = \frac{-1}{0}$ تعریف نشده	۳
الف) $\sin \alpha = \frac{1}{2}$ $\alpha = 30^\circ \text{ و } 150^\circ$ $\alpha = \frac{\pi}{6} \text{ و } \frac{5\pi}{6}$ (۲) ✓	ب) $\cos \alpha = \frac{\sqrt{2}}{2}$ $\alpha = [0, \pi] \rightarrow$ $\alpha = \frac{\pi}{4} \text{ و } \frac{3\pi}{4}$	ج) $\tan 150^\circ$ $\frac{\sin}{\cos} = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$	د) $\cot 110^\circ$ $\frac{\cos}{\sin} = \frac{-1}{0}$	۴
الف)  (۲) ✓				۵

Ⓟ ✓



6

الف) $y = (x-2)(x-3)(x-5)$



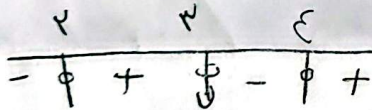
Ⓟ ✓

ب) $y = (x-2)(x-3)^2(x-5)$



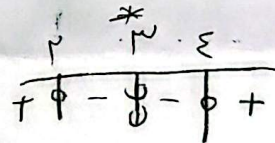
7

الف) $\frac{(x^2-2)(x^2-5)}{x^2-3}$



Ⓟ ✓

ب) $y = \frac{(x-2)(x-5)}{(x-3)^2}$



8

الف) $\frac{x^3-1}{x^2-3}$ $\frac{(x-1)(x^2+x+1)}{x^2-3}$

Ⓟ

ب) $\frac{x^2-1}{x^2-5x+6} = \frac{(x-1)(x+1)}{(x-2)(x-3)}$

9

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

Ⓟ ✓

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

ریشه 1/2

10