

تابع است ✓

$$y_1^3 = 2x_1^2 - 1 \quad x_1 = x_2 \rightarrow y_1^3 = y_2^3 \rightarrow y_1 = y_2$$

$$y_2^3 = 2x_2^2 - 1$$

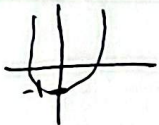
ب) $y_1^3 + y_1 = 2x_1^2 - 1 \quad x_1 = x_2 \rightarrow y_1^3 + y_1 = y_2^3 + y_2 \rightarrow y_1^3 - y_2^3 + y_1 - y_2 = 0$

$$y_2^3 + y_2 = 2x_2^2 - 1$$

تابع است ✓

$$(y_1 - y_2)(y_1^2 + y_1 y_2 + y_2^2 + y_1 + y_2 + 1) = 0 \rightarrow y_1 - y_2 = 0 \rightarrow y_1 = y_2$$

 Δ چهار دوم منفی است و بیشتر ندارد.

الف) شکل  تابع است ✓

ب) مثال منفی $\rightarrow k = 0 \rightarrow k = \pm 1$

ج) $y_1^3 = -x_1^3 + 2x_1 - 1 \rightarrow x_1 = x_2 \rightarrow y_1^3 = y_2^3 \rightarrow y_1 = y_2$
 $y_2^3 = -x_2^3 + 2x_2 - 1$

د) $\sqrt[3]{y_1} = \sqrt[3]{-x_1^3 + 2x_1 - 1} \quad x_1 = x_2 \rightarrow \sqrt[3]{y_1} = \sqrt[3]{y_2} \rightarrow y_1 = y_2$
 $\sqrt[3]{y_2} = \sqrt[3]{-x_2^3 + 2x_2 - 1}$

الف) $\frac{\sqrt[3]{x}}{x} = \sqrt[3]{x}$ ب) $-\frac{\sqrt[3]{x}}{x} = \sqrt[3]{x}$ ج) $-\frac{1}{\frac{\sqrt[3]{x}}{x}} = -\frac{1}{\sqrt[3]{x}} = \frac{\sqrt[3]{x}}{x}$
 د) $\frac{1}{x} = \frac{1}{0}$ تقریب نشده

الف) $q = \frac{\pi}{4}$ و $\frac{5\pi}{4}$

ب) $q = \frac{\pi}{4}$ و $\frac{7\pi}{4}$

① $y = -2x + 6$

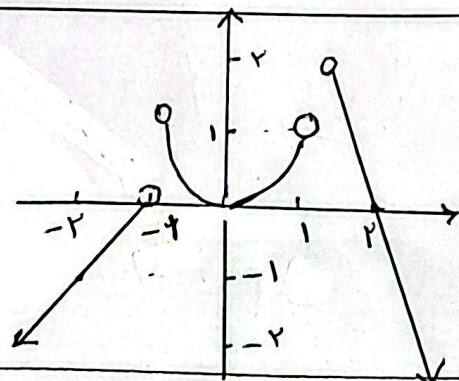
$$\begin{array}{r|rr} x & 0 & 3 \\ \hline y & 6 & 0 \end{array}$$

③ $y = x + 1$

$$\begin{array}{r|rr} x & -1 & -2 \\ \hline y & 0 & -1 \end{array}$$

⑤ $y = x^2$

$$\begin{array}{r|rr} x & -1 & 1 \\ \hline y & 1 & 1 \end{array}$$



① $y = -x + 3$

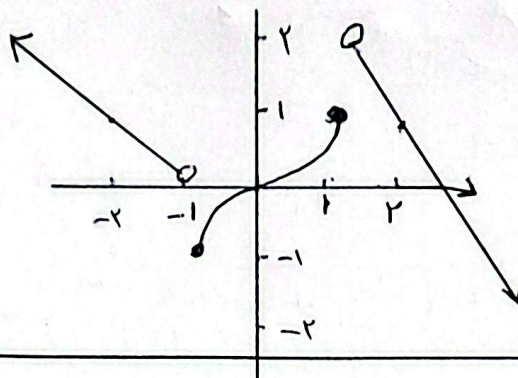
x	1	2
y	2	1

③ $y = -x - 1$

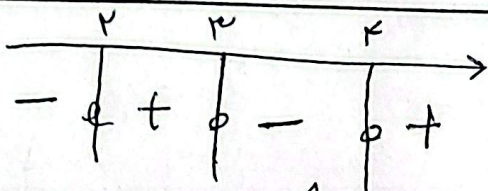
x	-1	-2
y	0	1

② $y = x^3$

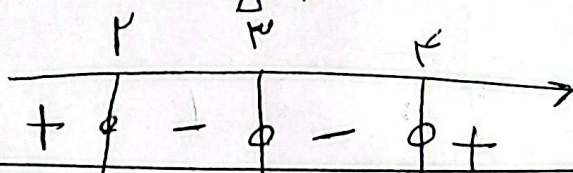
x	-1	1
y	-1	1



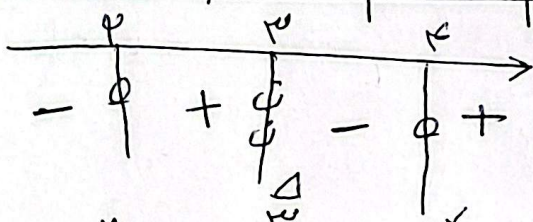
الف)



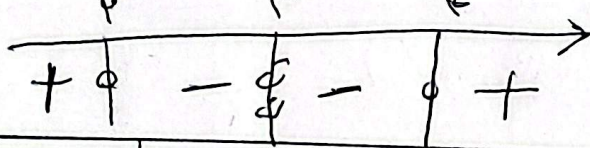
ب)



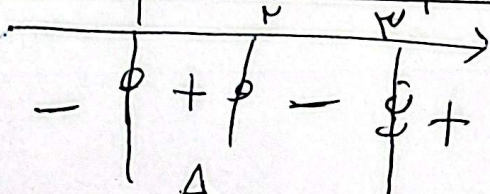
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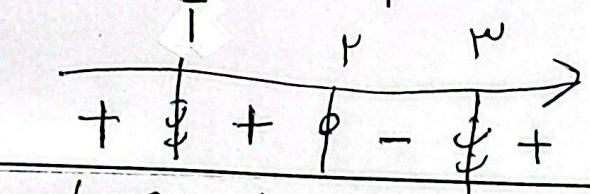
ب)



الف)



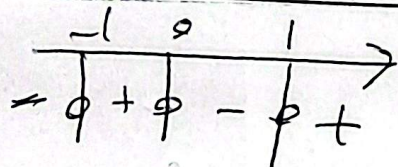
ب)



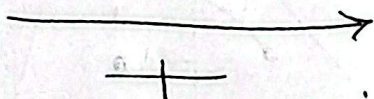
$$\frac{(x-2)(x-1)}{x-3} = 0$$

$$\frac{(x-2)(x-1)}{(x-3)(x-1)} = 0$$

الف)



ب)



$$\frac{x^2(x^2-1)}{x^2+x+2} = 0 \quad \Delta = 1-4 = -3$$

$$x^2+x+2 = 0 \quad \Delta = 1-4 = -3$$

$$x^2+2x+2 = 0 \quad \Delta = 4-4 = 0$$

نمونه صورت و نم نمون است