

الف) $x=1 \rightarrow y^3-1=2 \rightarrow y^3=3 \rightarrow y=\sqrt[3]{3}$ ✓

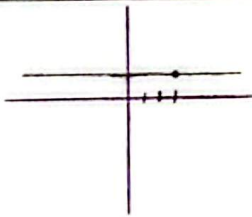
ب) $x=0 \rightarrow |y|=3 \rightarrow y=\pm 3$ ✗

ج) $\sqrt{x-4}=0$ و $|y-2|=0 \rightarrow x=4$ و $y=2$ ✓

د) $x=0 \rightarrow y=\frac{1}{2}, \frac{3}{2}, \dots$ ✗

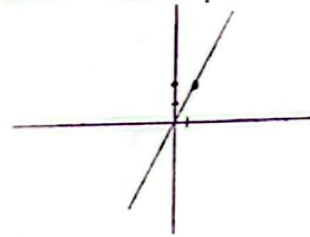
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الف)



$y=1$

ب)



$y=2x$
 $\hookrightarrow 2=2$

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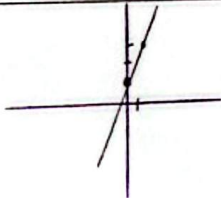
الف) $y=x \rightarrow a=1, b=0 \rightarrow a+2b=1$

ب) $\frac{-a}{2}=2 \rightarrow -a=4 \rightarrow a=-4$ / $1=4-1+b \rightarrow b=5$

$-4+10=6$

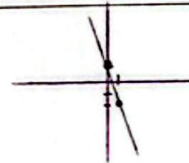
۳

الف)



x	0	1
y	1	3

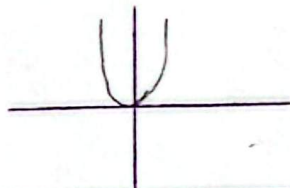
ب)



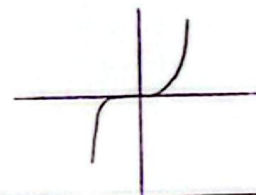
x	0	1
y	1	2

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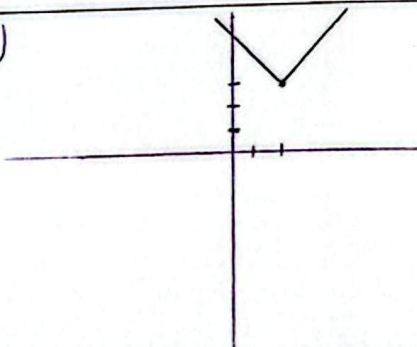
ج)



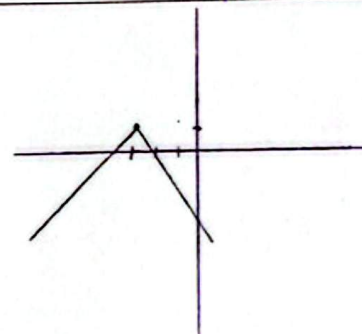
د)



الف)



ب)



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الف) $x^3 - 1^3 x \neq 0 \rightarrow x(x-1) \neq 0 \rightarrow \begin{cases} x \neq 0 \\ x \neq 1 \end{cases} \rightarrow D_f = \mathbb{R} - \{0, 1\}$

ب) $\Delta = 1^3 - 1^3(1) = -1 \rightarrow \Delta < 0 \rightarrow$ جواب حقیقی ندارد $\rightarrow D_f = \mathbb{R}$

ج) $\Delta = 1 - 1^3(1) = -1 \rightarrow \Delta < 0 \rightarrow$ جواب حقیقی ندارد $\rightarrow D_f = \mathbb{R}$

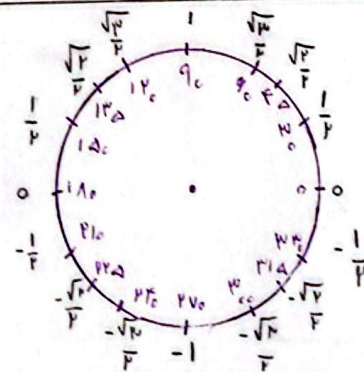
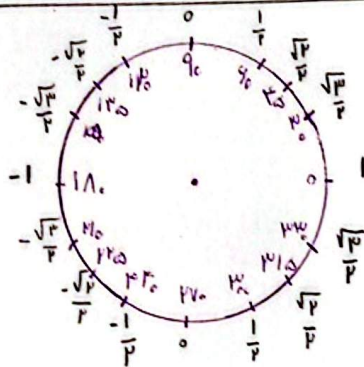
د) $x^3 - 1^3 x^2 \neq 0 \rightarrow x^2(x-1) \neq 0 \rightarrow \begin{cases} x \neq 0 \\ x \neq 1 \end{cases} \rightarrow D_f = \mathbb{R} - \{0, 1\}$

الف) $x-x \geq 0, x-1 \geq 0 \rightarrow x \leq 1, x \geq 1 \rightarrow D_f = [1, 1]$

ب) $D_f = \mathbb{R}$

ج) $x-1 \neq 0, x-1 \geq 0 \rightarrow x \neq 1, x \geq 1 \rightarrow D_f = [1, +\infty) - \{1\}$

د) $D_f = \mathbb{R} - \{0\}$



$+\frac{1}{\sqrt{2}} \rightarrow 45^\circ, 135^\circ \rightarrow \frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$

$-\frac{\sqrt{2}}{2} \rightarrow 225^\circ, 315^\circ \rightarrow \frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$

الف)

ب)