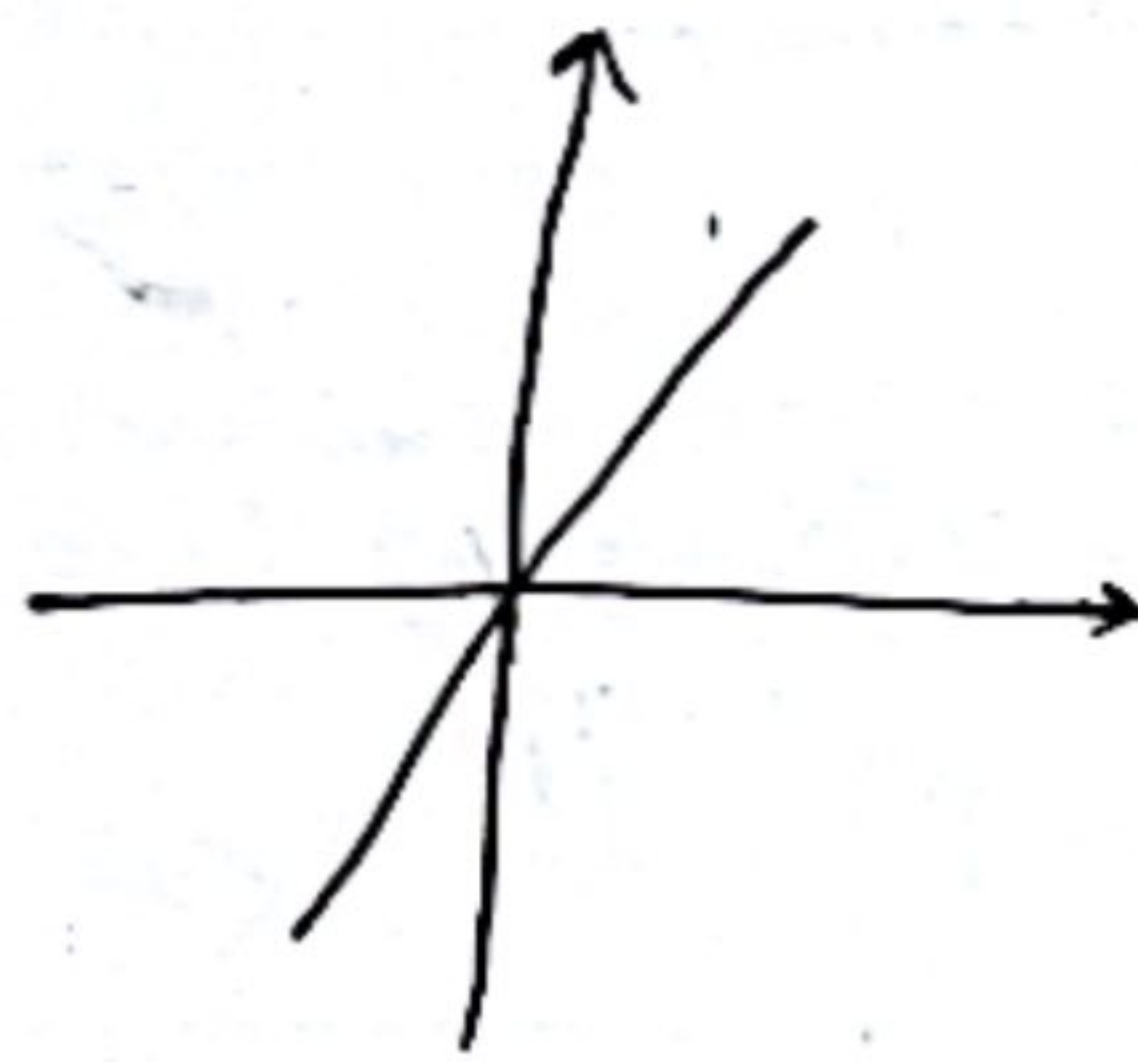


الف) $\begin{cases} y_1^3 = 2x_1^2 - a_1 \\ y_2^3 = 2x_2^2 - a_2 \end{cases} \xrightarrow{a_1=a_2} y_1^3 = y_2^3 \Rightarrow y_1 = y_2 \checkmark$

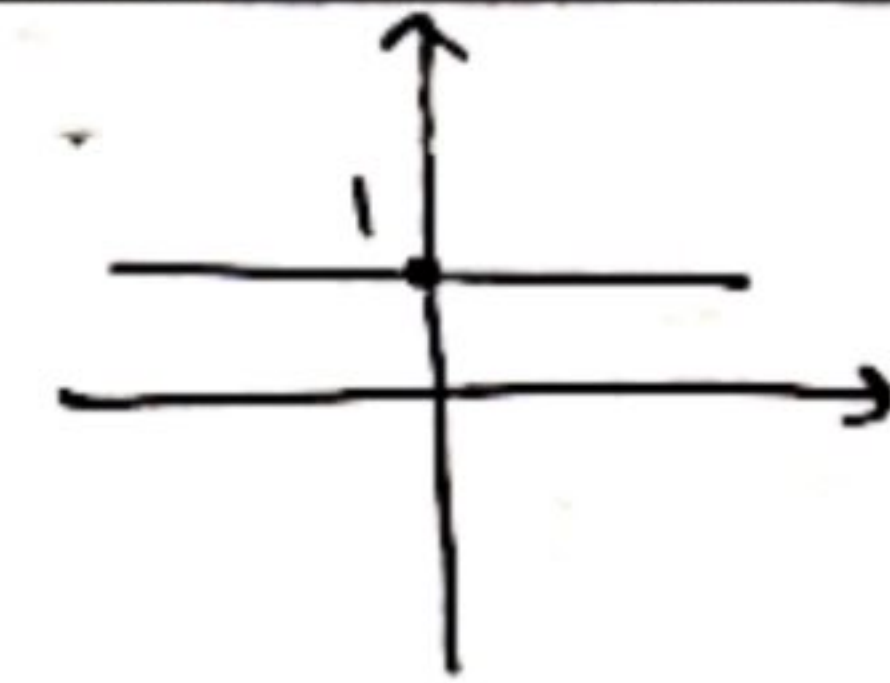
ب) $n=0 \Rightarrow |a|=3 \Rightarrow y = \pm 3 \times$

ج) $\sqrt{x-4} = 0 \Rightarrow x=4$
 $|y-2|=0 \Rightarrow y=2 \checkmark$

د) $n=0 \Rightarrow \cos y = 0 \Rightarrow y = \frac{\pi}{2} \text{ و } \frac{3\pi}{2} \dots \times$



ب) $y = 2x + b$
 $2 = 2 + b \Rightarrow b = 0$
 $\Rightarrow y = 2x$



الف) $y = 1$

$m = \frac{-b}{a} = \frac{-a}{2} = 2$

$\Rightarrow a = -4$

$1 = 4 + \frac{2(-4)}{-1} + b$

$\Rightarrow b = -5 \Rightarrow a + b = -9$

(ب)

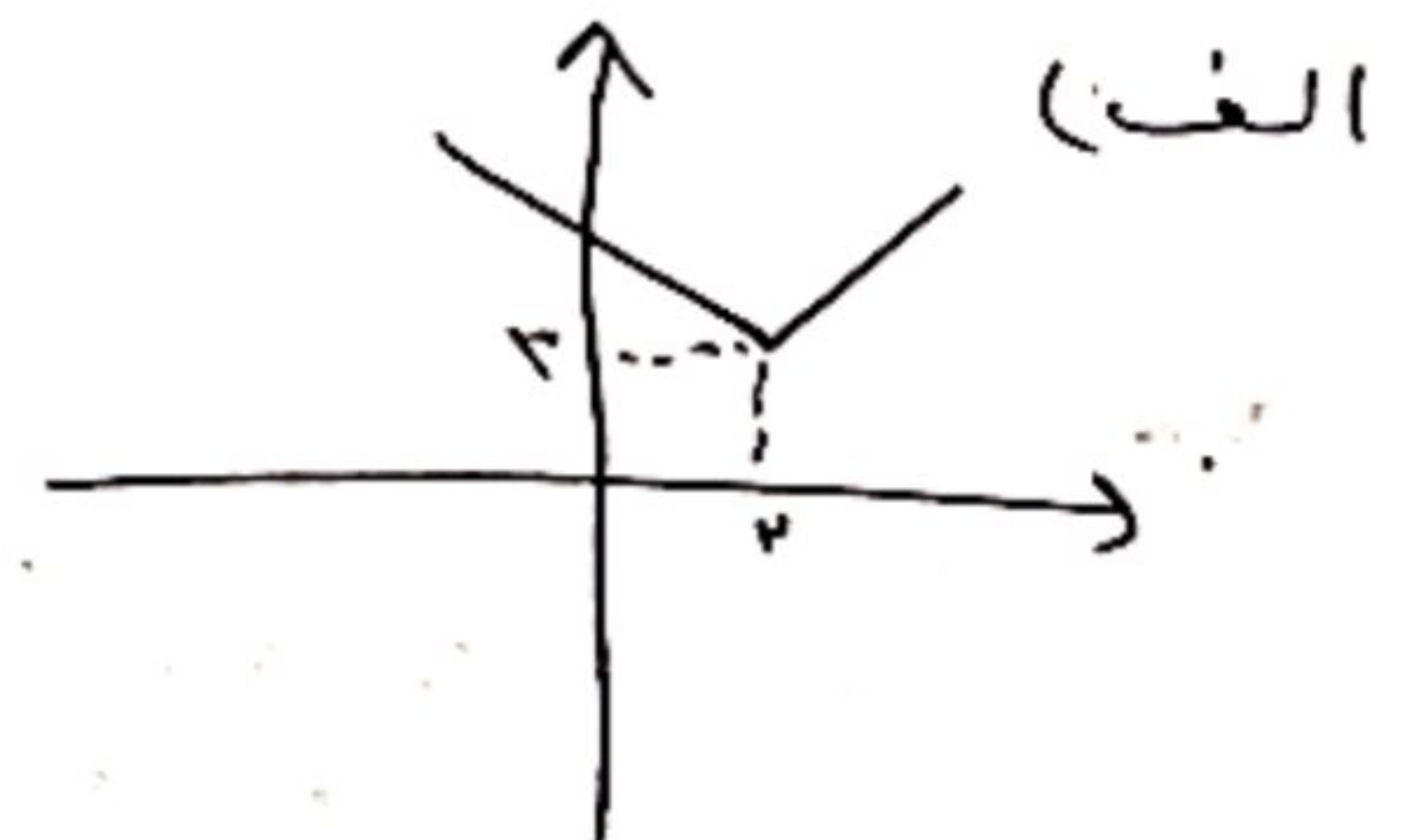
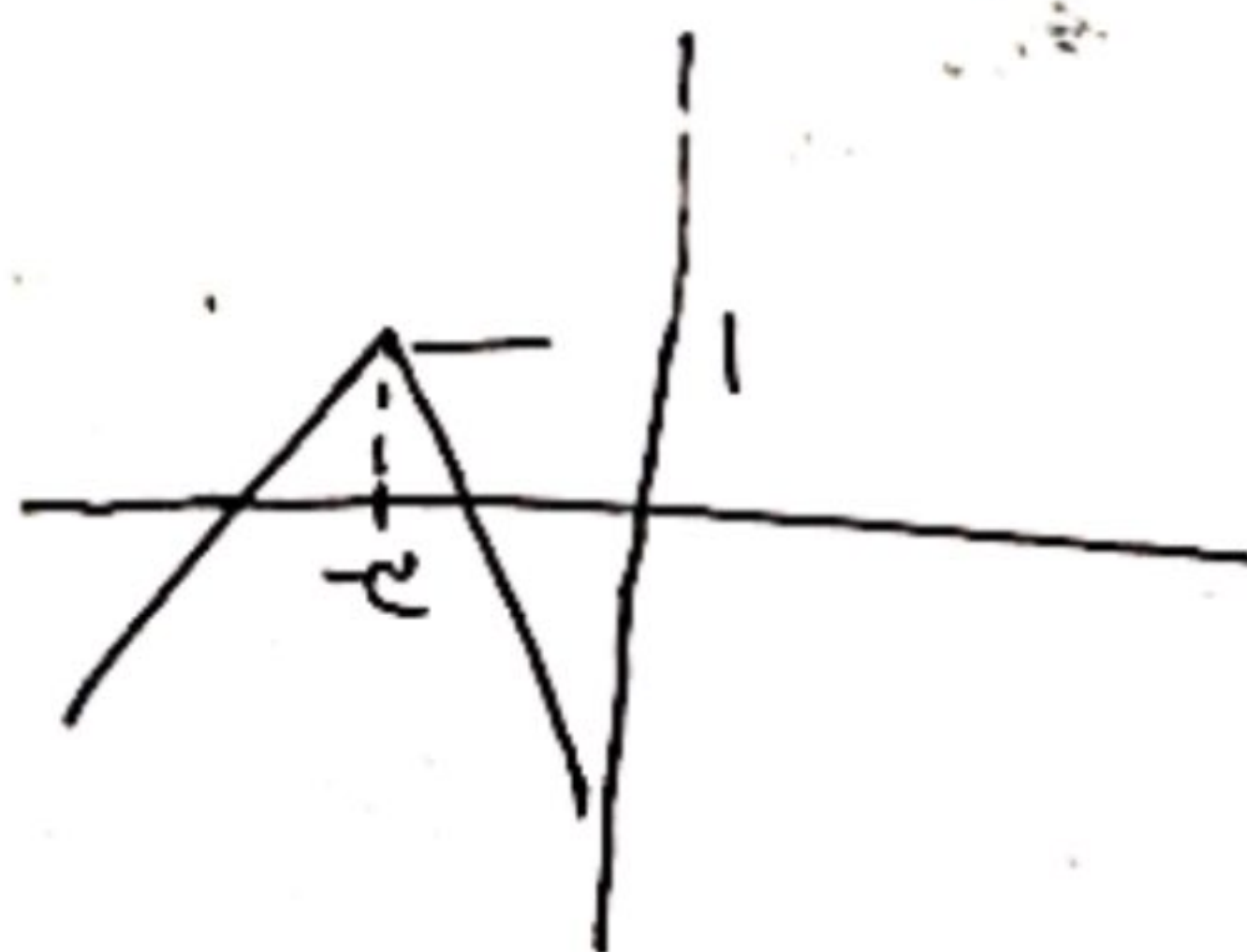
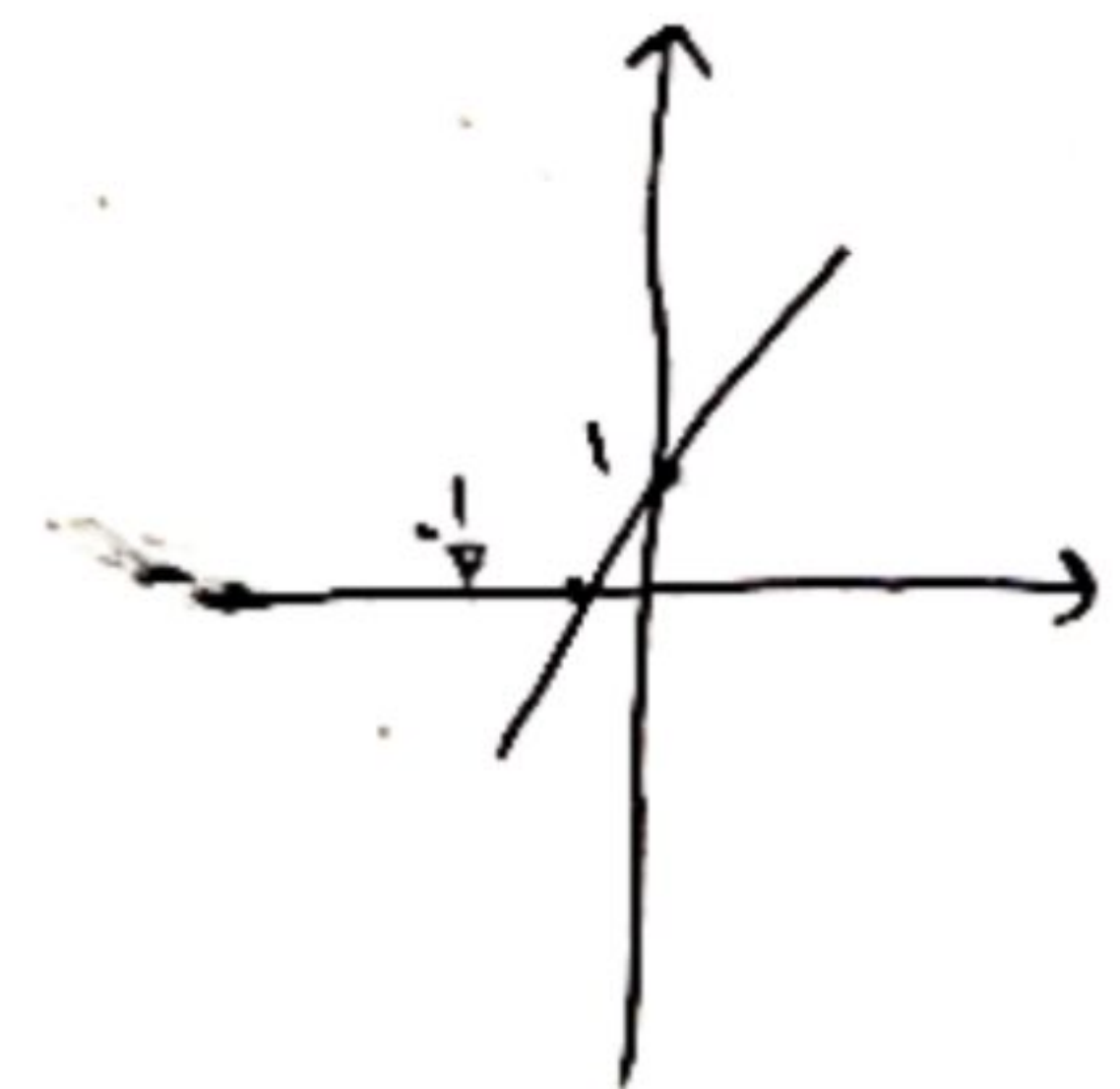
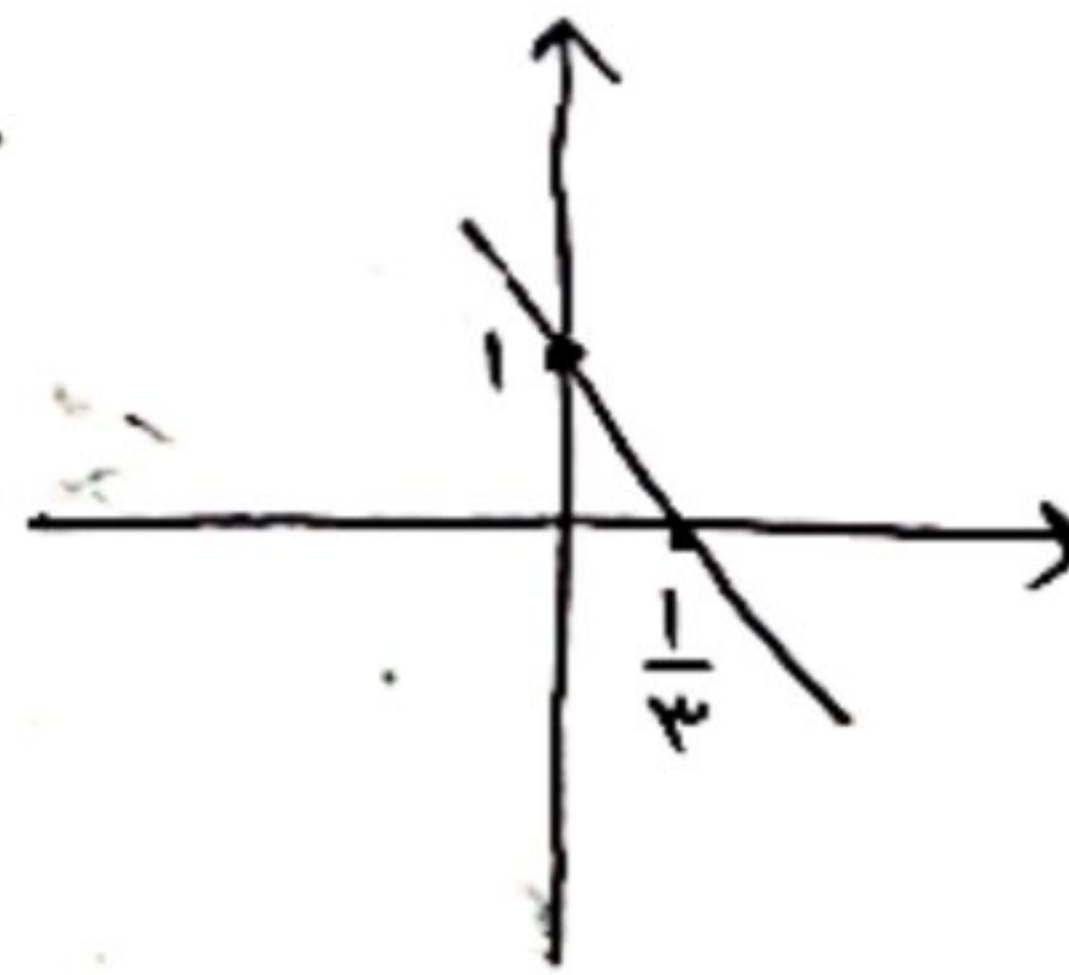
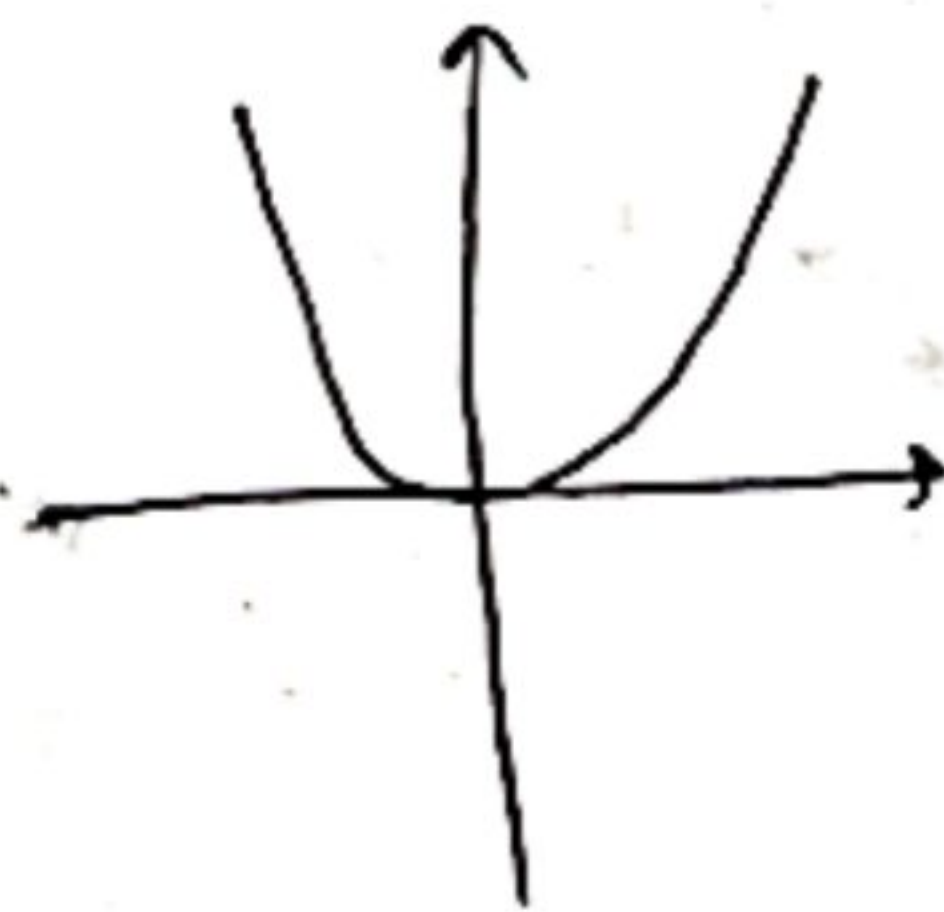
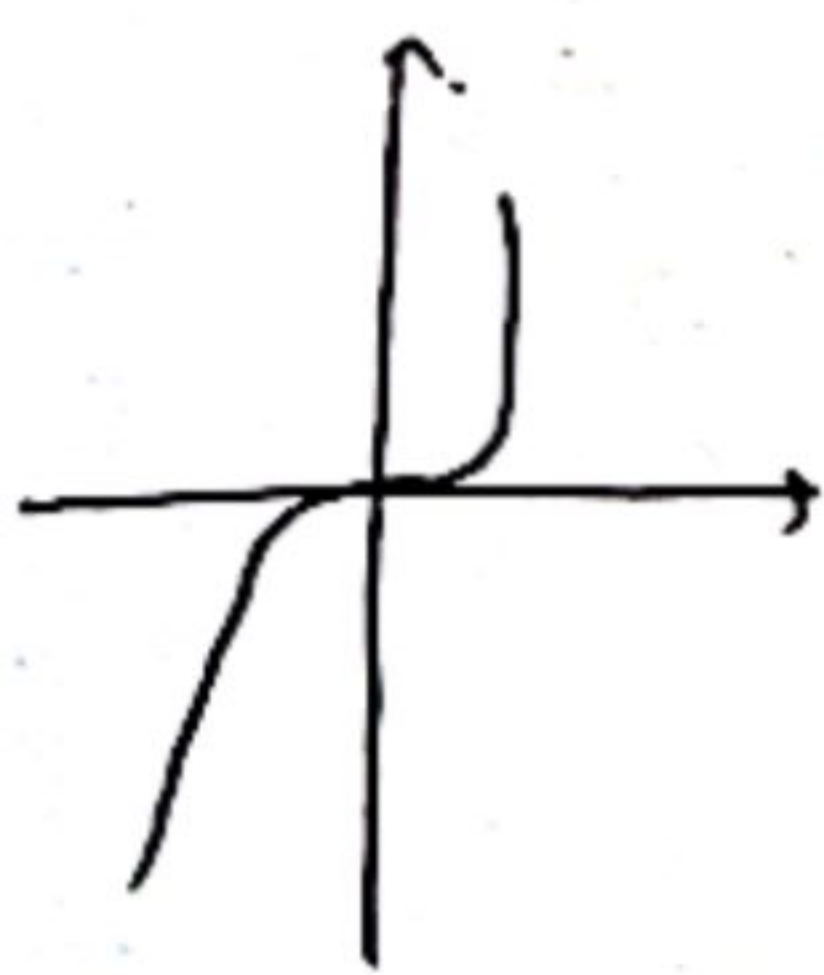
$y = a_1$

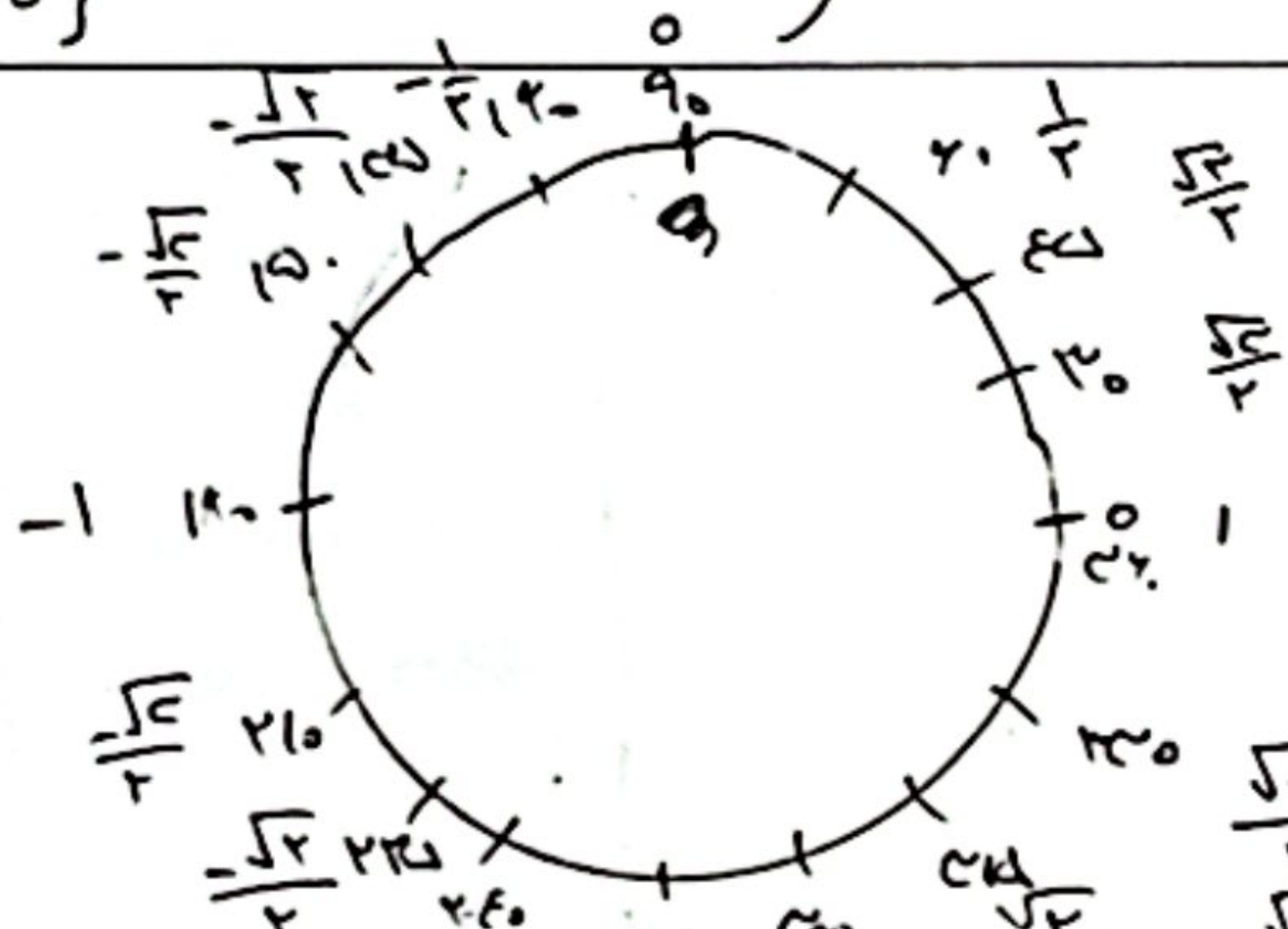
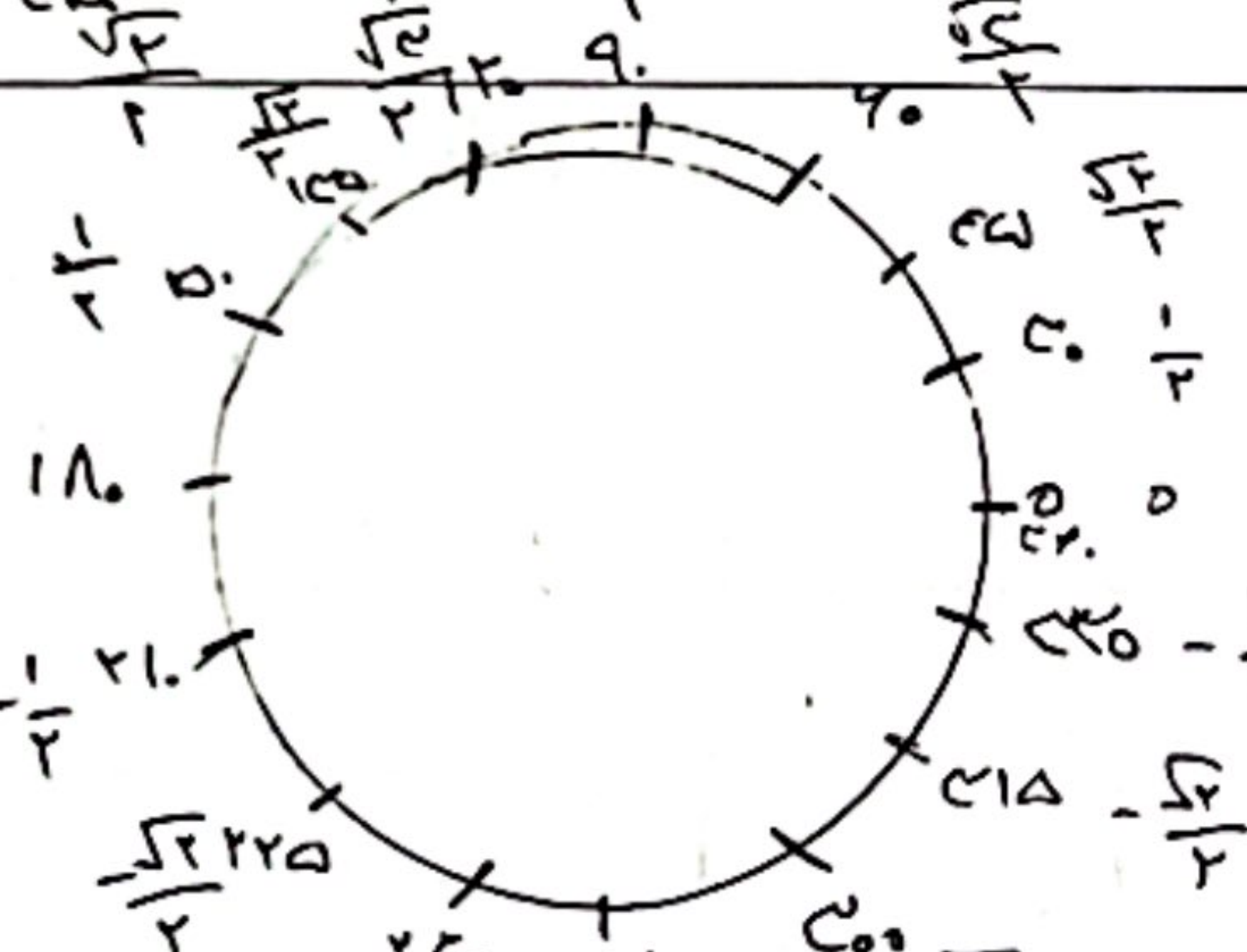
$\Rightarrow a = a_1 + b$

~~$a = a_1 + b$~~

$\begin{cases} a = 1, b = 0 \\ \Rightarrow a + b = 1 \end{cases}$

الف)



$\Delta < 0$ $\Rightarrow D = \mathbb{R}$ $x^2(x^2-4) \neq 0$ $\Rightarrow x^2 \neq 0, x \neq \pm 2$ $\Rightarrow D = \mathbb{R} - \{0, \pm 2\}$	(ج) $x(x-4) \neq 0$ $\Rightarrow x \neq 0, x \neq 4$ $\Rightarrow D = \mathbb{R} - \{0, 4\}$ (ب) $\Delta < 0 \Rightarrow x \neq 0$ $\Rightarrow D = \mathbb{R}$	٦
$\sqrt{x+2} \geq 0 \Rightarrow x \geq -2, x \neq 4$ $\Rightarrow D = [-2, \infty) - \{4\}$ $x^2 \geq 0, x \geq 0$ $\Rightarrow x^2 + x \geq 0$ $\Rightarrow D = \mathbb{R} - \{0\}$	(ج) $x-4 \geq 0$ $\Rightarrow x \geq 4$ $\Rightarrow D = [4, \infty)$ (ب) $x^2+1 \geq 0 \Leftrightarrow x^2 \geq -1$ $D = \mathbb{R}$	٧
		٨
$\sin \alpha = -\frac{\sqrt{3}}{2}$ $\alpha = \left\{ \frac{4\pi}{3}, \frac{5\pi}{3} \right\}$	$\sin \alpha = \frac{1}{2}$ $\Rightarrow \alpha = \left\{ 30^\circ, 150^\circ \right\} = \left\{ \frac{\pi}{6}, \frac{5\pi}{6} \right\}$	٩
$\sin \alpha = -\frac{\sqrt{3}}{2}$ $\alpha = \left\{ \frac{4\pi}{3}, \frac{5\pi}{3} \right\}$	$\sin \alpha = \frac{1}{2}$ $\Rightarrow \alpha = \left\{ 30^\circ, 150^\circ \right\} = \left\{ \frac{\pi}{6}, \frac{5\pi}{6} \right\}$	١٠