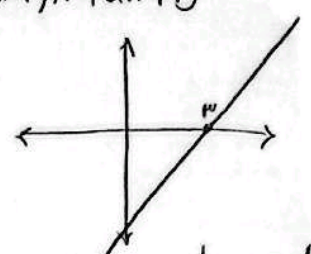
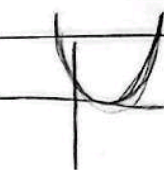
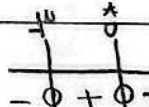


$a=2$ $x^2 + b = f(x)$ $2x^2 + b = f(x)$ $4 + b = 0 \Rightarrow b = -4$	$[2, +\infty)$ $f(x) = \sqrt{(a-x)x^2 + ax + b}$ 	1
$x^2 + 2x + 2 - m^2 \geq 0$ $\Delta \leq 0$ $4 - 4(1)(2 - m^2) \leq 0$	$f(x) = \sqrt{x^2 + 2x + 2 - m^2}$ $D_f = \mathbb{R}$  $m^2 - 4 \leq 0 \Rightarrow -2 \leq m \leq 2$ $1 - (-1) = 2$	2
$\sum x^2 \geq 0$ $x^2 \leq 4$ $-2 \leq x \leq 2$ $D_f = \{-2, -1, 0, 1, 2\}$	$f(x) = \frac{\sqrt{4 - x^2}}{[x] + [-x] + 1}$ $\Rightarrow$ if $x \notin \mathbb{Z} \Rightarrow -1 \Rightarrow -1 + 1 = 0$ if $x \in \mathbb{Z} \Rightarrow 0 \Rightarrow 0 + 1 = 1$	3
$y = \sqrt{x^2 + 2x^2} = \sqrt{3x^2}$ $x^2(x+2) \geq 0$	 $D_f = [-2, +\infty)$ $y = \sqrt{\frac{(x^2-1)(x^2-2x^2)}{x^2-1}}$ $\frac{(x-1)(x+1)(x^2-2x^2)}{(x-1)(x^2+1+x)} \geq 0$ $D_f = [-1, 0] \cup [2, +\infty)$	4
$y = \sqrt{ x-2 - 3}$ $x-2 - 3 \geq 0$ $x-2 \geq 3 \Rightarrow x-2 \geq 3 \vee x-2 \leq -3$ $D_f = [5, +\infty) \cup (-\infty, -1]$	$3 - 2-x \geq 0 \Rightarrow 3 \geq 2-x \geq -3$ $1 \geq -x \geq -5 \Rightarrow -1 \leq x \leq 5$ $D_f = [2, 4]$	5

$$y = \sqrt{1 - x|x|} \quad 1 - x|x| \geq 0 \quad x|x| \leq -1 \quad D_f = (-\infty, -1]$$

$$y = \frac{1}{\sqrt{\mu - |x - \omega|} - 1} \quad \sqrt{\mu - |x - \omega|} - 1 \neq 0 \quad \sqrt{\mu - |x - \omega|} \neq 1$$

$$D_f = [\mu, \mu] - \{\mu, \mu\} \quad \mu - |x - \omega| \neq 1 \quad |x - \omega| \neq \mu - 1$$

$$\mu - |x - \omega| \geq 0 \quad |x - \omega| \leq \mu \quad \mu - 1 \leq x - \omega \leq \mu \quad \mu - 1 \leq x \leq \mu$$

$$\frac{x+1}{x+1} \quad \frac{x+1}{x+1}$$

$$الف) y = \frac{\sin^2 x - 1}{\cos x} \quad D_f = \mathbb{R} - \left\{ \frac{\pi}{2} + \frac{\pi}{2} \right\}$$



$$ب) y = \frac{\cos x}{\sqrt{\cos x} - 1} \quad D_f = \mathbb{R} - \left\{ \frac{\pi}{2} + \frac{\pi}{2}, \frac{\pi}{2} + \frac{\pi}{2} \right\}$$



$$الف) y = \frac{x + \mu}{|x + 1| - |x + \mu|}$$

$$(|x + 1| \neq |x + \mu|) \quad D_f = \mathbb{R} - \left\{ \frac{\mu}{2}, \frac{\mu}{2} \right\}$$

$$\sum x^2 + 1 + \varepsilon x \neq x^2 + 9 + 4x \quad x^2 - 4x - 8 \neq 0$$

$$\Rightarrow y = \sqrt{|x + 1| - |x + \mu|}$$

$$x^2 - 4x - 8 \neq 0 \quad (x - 4)(x + 2) \neq 0 \quad x \neq 4, x \neq -2$$

$$|x + 1| > |x + \mu| \quad \sum x^2 + 1 + \varepsilon x > x^2 + 9 + 4x \quad x^2 - 4x - 8 > 0$$

$$D_f = (-\infty, \frac{\mu}{2}] \cup [\frac{\mu}{2}, +\infty)$$

$$f(x) = \sqrt{\log_{\omega} (x - 1)}$$

$$x - 1 \geq 0 \quad x \geq 1$$

$$\log_{\omega} (x - 1) \geq 0$$

$$D_f = (\mu, +\infty)$$

$$\log_{\omega} \log_{\omega} (x - 1) > 0 \quad \log_{\omega} (x - 1) > 1 \quad x - 1 > \omega \quad x > \omega + 1$$

$$x > \frac{1}{\omega}$$

$$x - 1 > 1 \quad x > 2 \quad x > 1$$

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$$الف) y = \log(\sqrt{\cos x} + 1) \quad \sqrt{\cos x} + 1 > 0$$

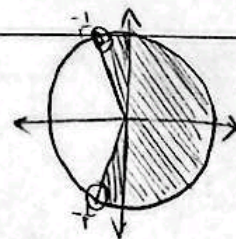
$$D_f = \left(\frac{\pi}{2} + \frac{\pi}{2}, \frac{\pi}{2} + \frac{\pi}{2} \right) \quad \sqrt{\cos x} > -1$$

$$ب) y = \sqrt{\log \frac{x-1}{x+1}}$$

$$\frac{x-1}{x+1} > 0 \quad x > 1$$

$$\frac{x-1}{x+1} > 0 \quad x > 1$$

$$D_f = (-\infty, -1) \cup (1, +\infty)$$



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