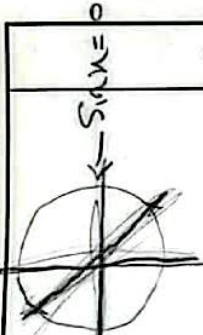
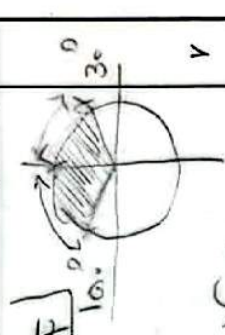
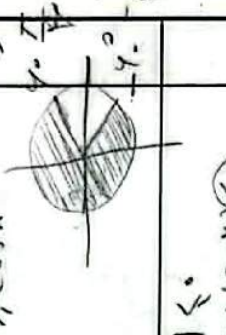
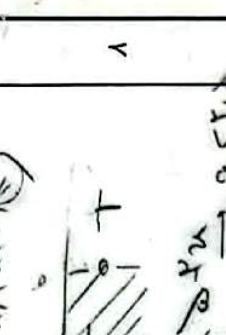
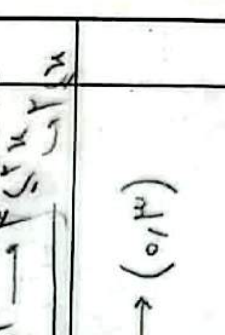
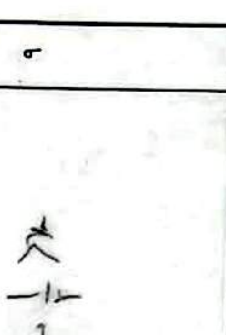
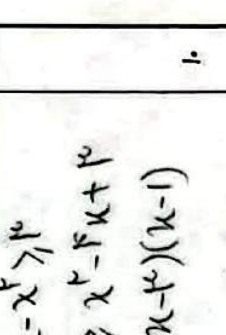
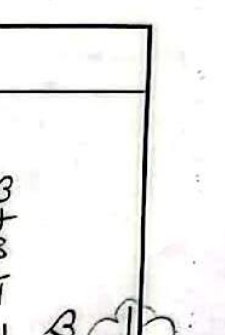


$y = \frac{\cot x + 1}{\tan x + 1} \rightarrow \tan x \neq -1 \rightarrow \tan^2 x \neq 0$ $\rightarrow R - \frac{1}{2}k\pi, k\pi + \frac{\pi}{2} \mid k\pi - \frac{\pi}{2}$ $\mid \sin x > 0$	
$\rightarrow \sqrt{1 - \sin^2 x} = \cos x$ $\mid \sin x = \frac{1}{2}$ $\mid \sin x = -\frac{1}{2}$	$\tan x = \frac{\sin x}{\cos x} \rightarrow \sin x = 0$ $\rightarrow [k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4}]$
$y = \sqrt{1 - \sin^2 x} \rightarrow \sqrt{1 - \sin^2 x} = \cos x$ $\mid \sin x = \frac{1}{2}$ $\mid \sin x = -\frac{1}{2}$	
$y = \sqrt{1 - \cos^2 x} \rightarrow \sqrt{1 - \cos^2 x} = \sin x$ $\mid \cos x = \frac{1}{2}$ $\mid \cos x = -\frac{1}{2}$	
$y = \arcsin(\sin x) \rightarrow \sin x = \frac{1}{2}$ $\mid \sin x = \frac{1}{2}$ $\mid \sin x = -\frac{1}{2}$	
$y = \arccos(\cos x) \rightarrow \cos x = \frac{1}{2}$ $\mid \cos x = \frac{1}{2}$ $\mid \cos x = -\frac{1}{2}$	
$y = \log_p(x) \rightarrow \log_p(x) > 0 \rightarrow x > 1$ $\mid \log_p(x) > 0 \rightarrow x > 1$	
$y = \log_p(x) \rightarrow \log_p(x) < 0 \rightarrow x < 1$ $\mid \log_p(x) < 0 \rightarrow x < 1$	
$y = \sqrt{1 - x^2} \rightarrow 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1$ $\mid \sqrt{1 - x^2} \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1$	
$y = \frac{x + \delta}{x + \epsilon} \rightarrow \frac{x + \delta}{x + \epsilon} = k \rightarrow x + \delta = k(x + \epsilon) \rightarrow x + \delta = kx + k\epsilon \rightarrow x - kx = k\epsilon - \delta \rightarrow x(1 - k) = k\epsilon - \delta \rightarrow x = \frac{k\epsilon - \delta}{1 - k}$ $\mid \frac{x + \delta}{x + \epsilon} = k \rightarrow x = \frac{k\epsilon - \delta}{1 - k}$	

الف) $y = \frac{x+3}{x^3+x^2-18x+3} = \frac{x+3}{(x-1)(x^2+5x-3)} = \frac{x+3}{(x-1)(x-1)(x+3)} = \frac{1}{x-1}$

$x^2+5x-3 \rightarrow x^2+5x-4 \rightarrow (x+4)(x-1) = x^2+4x-4-x-1 = x^2+3x-5$

$\rightarrow y = \frac{x+3}{x^3+x^2+1 \cdot x+3} = \frac{(x+3)}{(x+1)(x^2+V_{2+3})} = \frac{(x+3)}{(x+1)(x+1)(x+1)} = \frac{1}{x+1}$

$x^2+V_{2+3} \rightarrow x^2+V_{2+3}+1 \cdot x+3 \rightarrow x^2+4x-4-x-1 = x^2+3x-5$

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

$\Delta = b^2-4ac = 1-4 \cdot 1 \cdot (-1) = 5 > 0$

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

$\Delta = b^2-4ac = 1-4 \cdot 1 \cdot (-1) = 5 > 0$

ج) $y = \frac{x^2-5|x-1|-2x+5}{x^3-5x+10} = \frac{x^2-5|x-1|-2x+5}{(x-5)(x-5)} = \frac{x^2-5|x-1|-2x+5}{(x-5)(x-5)}$

$x^2-5|x-1|-2x+5 \rightarrow x^2-5|x-1|-2x+5 \rightarrow x^2-5|x-1|-2x+5$

$x^2-5|x-1|-2x+5 \rightarrow x^2-5|x-1|-2x+5 \rightarrow x^2-5|x-1|-2x+5$

د) $\sqrt{[-x] + \dots} \rightarrow [-x] - 3 \rightarrow [-x] - 3 \rightarrow [-x] - 3$

$\frac{x^2+4}{[x]^2-2[x]-3} = \frac{x^2+4}{([x]-3)([x]+1)} = \frac{x^2+4}{([x]-3)([x]+1)}$

$[x]-3 > 0 \rightarrow [x] > 3 \rightarrow [x] > 3$

ه) $y = \sqrt{[x-\frac{1}{p}] + [x+\frac{1}{p}]} = \sqrt{[x-\frac{1}{p}] + [x+\frac{1}{p}]} = \sqrt{[x-\frac{1}{p}] + [x+\frac{1}{p}]}$

$[x-\frac{1}{p}] + [x+\frac{1}{p}] \rightarrow [x-\frac{1}{p}] + [x+\frac{1}{p}] \rightarrow [x-\frac{1}{p}] + [x+\frac{1}{p}]$

$[x-\frac{1}{p}] + [x+\frac{1}{p}] \rightarrow [x-\frac{1}{p}] + [x+\frac{1}{p}] \rightarrow [x-\frac{1}{p}] + [x+\frac{1}{p}]$

و) $x \in \mathbb{Z} \rightarrow x \in \mathbb{Z} + \frac{1}{p} \rightarrow x \in \mathbb{Z} + \frac{1}{p} \rightarrow x \in \mathbb{Z} + \frac{1}{p}$

$x \in \mathbb{Z} \rightarrow x \in \mathbb{Z} + \frac{1}{p} \rightarrow x \in \mathbb{Z} + \frac{1}{p} \rightarrow x \in \mathbb{Z} + \frac{1}{p}$