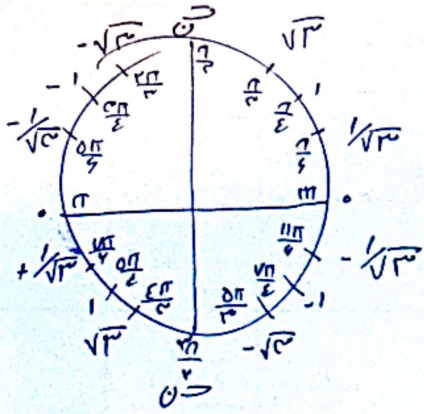




$$\cos(\sin \theta) + \sin(\cos \theta)$$

$$\cos(0) + \sin\left(\frac{\pi}{2}\right)$$

c) $1 + 1 = 2$

$$\cos \frac{\pi}{4} + \cos \frac{\pi}{4}$$

$$\sin \frac{\pi}{4} = \frac{1}{\sqrt{2}}$$

$$\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{2}{\sqrt{2}} = \sqrt{2}$$

$$-\cos \frac{\pi}{4} + \sin \frac{\pi}{4}$$

$$\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{2}{\sqrt{2}} = \sqrt{2}$$

$$\sin \frac{\pi}{4} + \cos \frac{\pi}{4} + \cos \frac{\pi}{4}$$

$$\frac{1}{\sqrt{2}} + 1 + \frac{1}{\sqrt{2}} = 1 + \sqrt{2}$$

$$f(n) \begin{cases} n^2 + 5n & n \text{ is odd} \\ 5n^2 & n \text{ is even} \end{cases} \Rightarrow a^2 + 5a = 5a + a^2 \quad a^2 = a \quad \text{Pro } a=1$$

a) c) $a = 5 \pm 5i$ $f(1) = 1 + 5 = 6$ $f(1) = 5$

$$f(n) \begin{cases} n^2 - b & |n+1| \geq 1 \\ a + n & -1 \leq n \leq 1 \end{cases}$$

$$1n - b = a - 1$$

$$a + b = 1$$

$$y = \frac{1}{n^2 + 5n + 6}$$

$$n^2 + 5n + 6 = (n+2)(n+3)$$

$n \neq -2, -3$

$$y = \frac{1}{n^2 - 5n + 6} = \frac{1}{(n-2)(n-3)}$$

$n \neq 2, 3$

$$y = \frac{\sqrt{4-cx}}{\sqrt{4cx}} \Rightarrow 4cx \geq 0$$

$$4cx \geq 0 \Rightarrow cx \geq 0 \Rightarrow x \geq \frac{1}{c}$$

$$\frac{1}{c} \leq x < \infty \Rightarrow \mathcal{D}_f = \left[\frac{1}{c}, \infty\right)$$

$$y = \sqrt{xc-1} + \sqrt{x-1}$$

$$x \geq 1 \quad x \geq 1 \quad x \geq 1$$

$$x \geq 1 \Rightarrow \mathcal{D}_f = [1, \infty)$$

$$\sqrt{9a-a} + \sqrt{b-5a} = y$$

$$4(1)-a = 0 \quad a \leq 1$$

$$b-4 = 0 \quad b = 4$$

$$\frac{b}{a} = \frac{1}{1}$$

$$\frac{x^2 - 5x - 8x + 4}{x^2 + 5x - 8x - 4} = \frac{(x-1)(x-4)(x+1)}{(x+1)(x+4)(x-4)}$$

$$+ \frac{1}{x-1} - \frac{1}{x+1} - \frac{1}{x-4} + \frac{1}{x+4}$$

$$\mathcal{D}_f = (-\infty, -5) \cup [-4, -1) \cup [1, 4) \cup [4, \infty)$$

$$\frac{x^2 - 5x - 4}{x^2 - 10x + 44} = \frac{(x-1)(x+1)}{(x-4)(x-11)}$$

$$+ \frac{1}{x-4} - \frac{1}{x-11} - \frac{1}{x-1} + \frac{1}{x-11}$$

$$\mathcal{D}_f = (-\infty, 1) \cup (1, 4) \cup (4, 11) \cup (11, \infty)$$

$$y = \sqrt{[x]-8} \Rightarrow [x] \geq 8$$

$$[x] \geq 8 \Rightarrow x \geq 8$$

$$x \geq 8 \Rightarrow \mathcal{D}_f = [8, \infty)$$

$$y = \sqrt{[x]-2} \Rightarrow [x] \geq 2$$

$$[x] \geq 2 \Rightarrow x \geq 2$$

$$\mathcal{D}_f = [2, \infty)$$

$$[x] \geq 2 \quad x \geq 2 \quad \textcircled{1}$$

$$[x] \leq 2 \quad x \leq 2 \quad \textcircled{2}$$

$$\mathcal{D} \cap \mathcal{D} = \emptyset \quad \mathcal{D} = \emptyset$$

Scanned with

$$\frac{x+1}{|x-1|} \geq \frac{-1}{-1+\frac{1}{x}+1}$$

$$\frac{x-1}{(x+1)^2} \geq \frac{-1}{-1+\frac{1}{x}+1}$$

$$\mathcal{D}_f = \textcircled{1} \cap \textcircled{2} \Rightarrow [-1, 1] - \{0\}$$