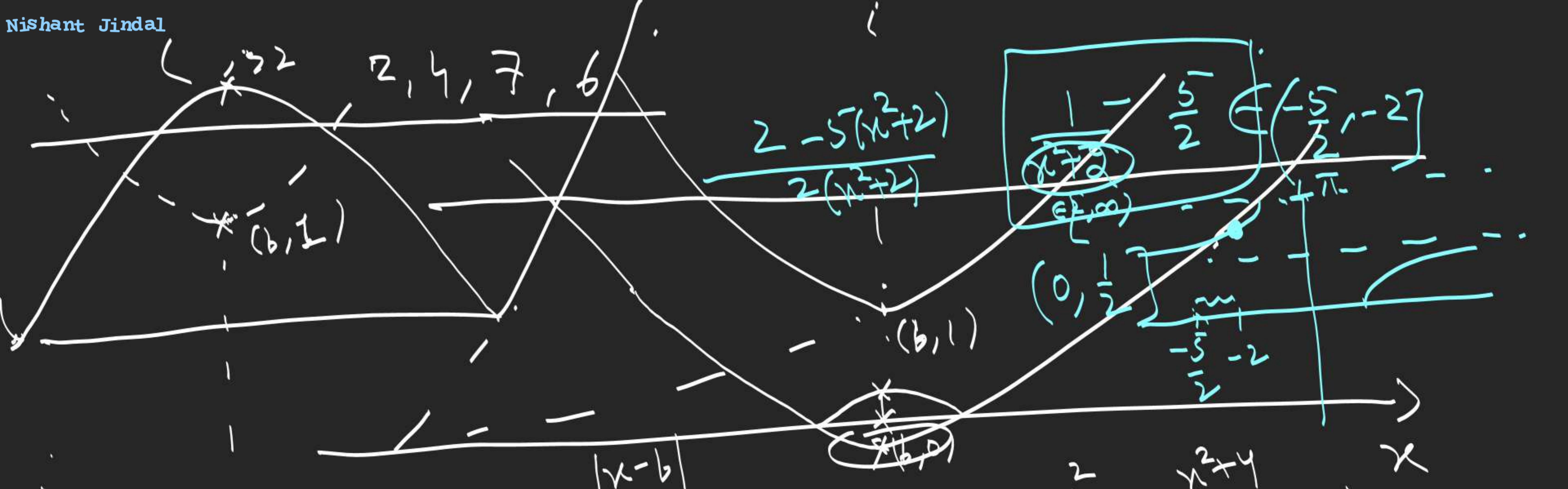
Nishant Jindal



$$y = e^{|x-b|}$$

$$16^{x+y^2} + 16^{x^2+y} = 1$$

$$\geq 2\left(16^{x+y^2+x^2+y}\right)^{\frac{1}{2}}$$

$$\geq 2\left(16^{-\frac{1}{2}+\frac{1}{4}+\frac{1}{4}-\frac{1}{2}}\right)^{\frac{1}{2}}$$

$$2 = \left|e^{|x-b|} - a\right|$$

$$\boxed{a > 3}$$

$$\boxed{(x,y) = \left(-\frac{1}{2}, -\frac{1}{2}\right)}$$

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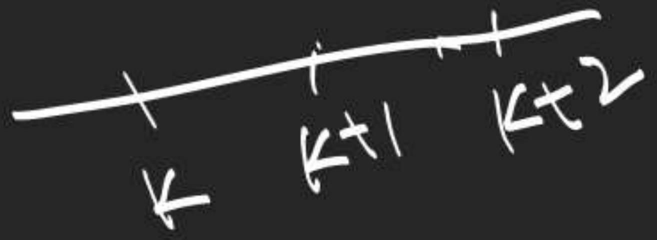
$$f(x) = 2x + [x] + \frac{\sin 2x}{2}$$

$[k, k+1)$ $\quad k \in I$.

$$f'(x) = 2 + \cos 2x > 0$$

$$2(k+1) + \boxed{k} + \frac{\sin(2k+2)}{2}$$

Into, 1-1



$$\boxed{x > 1}$$

$$[x] \le x$$

$$\boxed{\log_x [x]} \le \log_x x = 1$$

$\log_x$

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$$\left(-\frac{(3\sqrt{3}+4)}{5},\ 2\times\left(-\frac{1}{2}\right)\right)$$

$$x \in (180+53,\ 270)$$

$$-\sin(60+53)$$

$$-\left(\frac{\sqrt{3}}{2}\frac{3}{5}+\frac{1}{2}\frac{4}{5}\right)$$

$$\underbrace{[\underbrace{5\sin x}_{\in[-5,-4)}]}_{-5}+\underbrace{[\underbrace{\cos x}_{[-1,0)}]}_{-1}=-6$$

$$\sin x \in \left[-1,-\frac{4}{5}\right) \ \& \ \cos x \in [-1,0)$$

$$f(x)=2\sin\left(x+\frac{\pi}{3}\right)$$

$$(180+60+53,\ 270+60)$$

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$$\boxed{f(tx, ty) = t^n f(x, y)}$$

$$g(x) = \sqrt{2+x} + \sqrt{2-x} \in \left[2, 2\sqrt{2}\right]$$

$$g'(x) = \frac{1}{2\sqrt{2+x}} - \frac{1}{2\sqrt{2-x}} = \frac{\sqrt{2-x} - \sqrt{2+x}}{}$$

$$\frac{-2x}{\left(\sqrt{\ } + \sqrt{\ }\right) 2\sqrt{\ }\sqrt{\ }}$$

$1 + a^2 \leq 5$

$(1, 5)$

$\boxed{a^2 > 0}$

$(\ , 2) \quad (\ , 2)$

$\uparrow$

$\downarrow$

$x < 0$

$x > 0$

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$$(x^2+5x)(x-x^2) \geq 0$$

$$\boxed{-41}$$

$$\frac{2\left(2^{f^{-1}(x)} - 2^{-f^{-1}(x)}\right)}{2^{f^{-1}(x)} + 2^{-f^{-1}(x)}} = x$$

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

$$(2-x)t^2 = 2+x$$

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