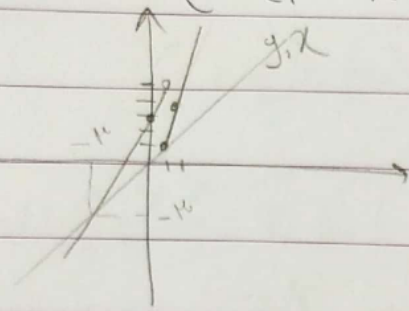


$$f(x) = \begin{cases} x-1 & x \geq 1 \\ x+1 & x < 1 \end{cases}$$

$$g(x) = \begin{cases} f(x) & x \geq 0 \\ f(x) \geq x \end{cases}$$

$$-1 \leq x$$

$$D_f = [-1, +\infty)$$



$$f(x) = x-1$$

$$f(\sin \pi + \cos \pi)$$

$$f\left(\frac{\sqrt{e}}{e} + 1\right) = \left(\frac{\sqrt{e}}{e} + 1\right) - 1 = \frac{\sqrt{e}}{e}$$

$$\frac{1}{e} \left(\frac{e}{e} + \sqrt{e} \right) - \frac{1}{e} \sqrt{e} = \frac{1}{e}$$

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

$$f(f(a)) = a$$

$$f\left(\frac{a+1}{a-1}\right) = a$$

$$\frac{a+1+a-1}{a-1}$$

$$\frac{2a}{a-1} = \frac{2a}{a-1} = a$$

$$a-1$$

Sum of (1) and (2) is 0

$$f(x) = x-1$$

$$x-1 = x-1$$

$$x-1 = x-1$$

$$(x-1)^2 = 0$$

$$x=1$$

$$g(x) = \begin{cases} x-1 & x \geq 1 \\ x+1 & x < 1 \end{cases}$$

$$g(a) = 1$$

$$a-1 = 1$$

$$a = 2$$

$$a = \pm \sqrt{0}$$

$$f(x+1) = x-1$$

$$x+1 = 1 \rightarrow x = 0$$

$$x+1 = -1 \rightarrow x = -2$$

$$f(x) \times f(-1) = 1 \times 1 = 1$$

Subject:

Date:

$$f(F \cos^2 \alpha + 2 \cos \alpha) = \tan^2 \alpha$$
$$F \cos^2 \alpha + 2 \cos \alpha = \frac{V}{F}$$

$$f\left(\frac{V}{F}\right) = \tan^2 \alpha = \boxed{10}$$
$$\frac{V}{F} = \frac{10}{(\sqrt{10})^2}$$

10)

$$F \cos^2 \alpha + 2 \cos \alpha = \frac{V}{F}$$

$$\cos^2 \alpha + 2 \cos \alpha = \frac{V}{F}$$

$$(F \cos \alpha + V)(F \cos \alpha - V) = 0$$

$$\cos \alpha = -\frac{V}{F} \quad \cos \alpha = \frac{V}{F} = \frac{1}{\sqrt{10}}$$

$$= -\frac{1}{\sqrt{10}} \quad \cos \alpha = \frac{1}{\sqrt{10}}$$

$$\cos \alpha = \frac{1}{\sqrt{10}}$$
$$\alpha = 90^\circ$$