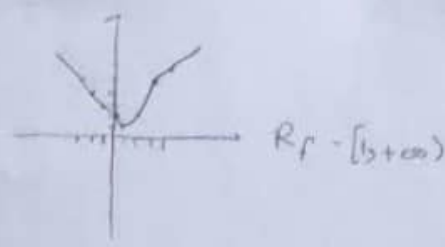


$$f(x) = \begin{cases} x+1 & x \geq 1 \\ x^2 - x + 1 & 0 \leq x < 1 \\ |x| + 1 & x < 0 \end{cases}$$

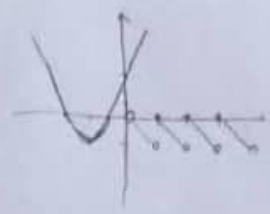
$x=1 \rightarrow 2$
 $x=0 \rightarrow 1$
 $x=-1 \rightarrow 2$
 $x=-2 \rightarrow 3$
 $x=-3 \rightarrow 4$



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$$f(x) = \begin{cases} x^2 + 1 & x \leq 0 \\ [x] - 1 & x > 0 \end{cases}$$

$x=0 \rightarrow 1$
 $x=-1 \rightarrow 2$
 $x=1 \rightarrow 0$
 $x=2 \rightarrow -1$
 $x=3 \rightarrow -2$
 $x=4 \rightarrow -3$
 $x=5 \rightarrow -4$
 $x=6 \rightarrow -5$



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

1, 1, 0

$$x+1 \geq 0 \Rightarrow x \geq -1 \Rightarrow x \geq \frac{-1}{1} \Rightarrow b = \frac{-1}{1}$$

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

$$ab = \frac{-1}{1} \times 1 = -1$$

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$$f(x) = \sqrt{x+1} + \sqrt{1-x} \Rightarrow x+1 \geq 0 \Rightarrow x \geq -1 \quad \cap \quad (-1+1) = 0 \Rightarrow x \leq 1$$

1, 1, 0

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

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

$$y = \frac{f(x)}{g(x)} = \frac{f(x)}{1} = f(x)$$

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



$R = [-1, \sqrt{1}]$

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

$x=-1 \rightarrow \sqrt{2}$
 $x=1 \rightarrow 0$
 $x=0 \rightarrow 1$