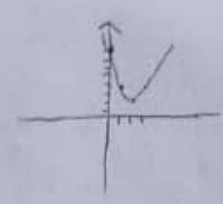


g. f. function of three variables

$$f = \{(-1, 2)(0, 1)(1, 3)\} \rightarrow f = \{(-1, 2)(0, 1)(1, 3)\} \quad r, a, b = 11$$

$$f(x) = \frac{1}{x} x + r, x = r \rightarrow f \rightarrow (-\infty, \infty]$$

$$-\frac{x^2}{x} + x + r > \frac{r}{x} \Rightarrow -x^2 + x + r > r \Rightarrow -x^2 + x > 0 \Rightarrow x^2 - x < 0$$



1	2	3	4
$-x+1$	$-x+2$	$-x+3$	$-x+4$
$(\frac{1}{1})$	$(\frac{2}{2})$	$(\frac{3}{3})$	$(\frac{4}{4})$

$[1, \infty) \rightarrow \dots$

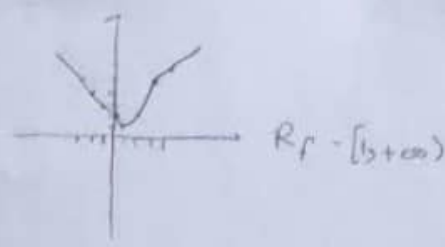
-1	0	1
$-x+1$	$-x+2$	$-x+3$
$(\frac{-1}{1})$	$(\frac{0}{2})$	$(\frac{1}{3})$



$$y = \frac{x^2 + ax + m}{x+1} \Rightarrow y(x+1) = x^2 + ax + m \Rightarrow x^2 + ax + m - y(x+1) = 0$$

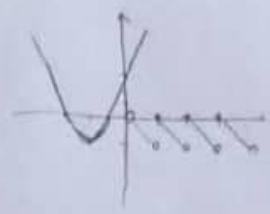
$$f(x) = \begin{cases} x+1 & x \geq 1 \\ x^2 - x + 1 & 0 \leq x < 1 \\ |x| + 1 & x < 0 \end{cases}$$

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



$$f(x) = \begin{cases} x^2 + 5x + 4 & x \leq 0 \\ [x] - 1 & x > 0 \end{cases}$$

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



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

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

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

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

$$1-x \geq 0 \Rightarrow x \leq 1$$

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

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

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

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

$$\Downarrow \frac{f(x) - y g(x)}{y} = \frac{-\sqrt{x+1} - \sqrt{1-x} + f(x)}{y} \Rightarrow \frac{-\sqrt{x+1} - \sqrt{1-x} + \sqrt{x+1} + \sqrt{1-x}}{y} = \frac{0}{y} = 0$$



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

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