

1) $f(x) = x+1$ $\rightarrow$ $[x] > f \rightarrow f(x) = x+1$

2) $f(x) = \begin{cases} x-1 & , [x] > f \\ f(x+1) & , [x] < f \end{cases}$ $\rightarrow$ $y = \sqrt{f(x) - x + 1}$

$\frac{1^x (1x^x + 1x^x + 1x^x + 1)}{(1x+1)^x} \rightarrow \frac{1^x (1x+1)^x}{(1x+1)^x} \neq 0$ $\rightarrow$ $1x+1 \neq 0 \rightarrow 1x \neq -1 \rightarrow x \neq -1$

$f(x) = (1x+1) \times 1^x = 1x+1$

$Df = \mathbb{R} - \{-1\}$

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

3) $f(x) = x+C$ $\rightarrow$ $f(x) = \begin{cases} \frac{1x^x + 1x^x - 1x - 1}{1x-1} & , x \neq \pm 1 \\ \frac{1x^x + 1x^x}{1x+1} & , x = \pm 1 \end{cases}$

$g(x) \Rightarrow \frac{(1x-1)(1x+1)}{1x^x + 1x^x + b}$

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

$-1+1+1 = 1$

$f(1-x) \Rightarrow (1-x-1)^x (1-x-1) \Rightarrow f(1-x) = (-1-x)^x - x$

$f(x+1) \Rightarrow (x+1-1)^x (x+1-1) \Rightarrow f(x+1) = (x-1)^x x$

$g(x) \Rightarrow (-1-x)^x - x + (x-1)^x x \Rightarrow x((-1-x)^x + (x-1)^x) \Rightarrow x(-1-x) \Rightarrow -1-x$

$-(1+x^x + 1x^x) \Rightarrow -1-x^x - 1x^x$

$$1) 1-2u = 1^u \rightarrow 2u = -1 \rightarrow u = -1 \implies \sqrt[3]{-1} + 2 \Rightarrow -1 + 2 = 1$$

$$2) 1-2u = -1 \rightarrow 2u = 2 \rightarrow u = 1 \implies \sqrt[3]{1} + 2 \Rightarrow 1 + 2 = 3$$

$$1 + 2 = 3$$

جواب

$$u + \sqrt{u} = 4 \implies \sqrt{u} = t \implies t^2 + t = 4 \implies t^2 + t - 4 = 0$$

$$(t+4)(t-2) = 0$$

$$f(u) = u^2 + \sqrt{u} \implies f(u + \sqrt{u}) = u^2 + \sqrt{u} + \sqrt{u} = u^2 + 2\sqrt{u}$$

$$f(4 + \sqrt{4}) = (4 + \sqrt{4})^2 + \sqrt{4} \Rightarrow 20 + 4 + 2 = 26$$

$$f(u-1) + f(1-u)$$

$$1) f(u-1) \Rightarrow (u-1)((u-1)^2 + 1) \Rightarrow (u-1)(u^2 - 2u + 2)$$

$$2) f(1-u) \Rightarrow (1-u)((1-u)^2 + 1) \Rightarrow (1-u)(1 - 2u + 2) \Rightarrow (1-u)(2 - 2u + 1)$$

$$\Rightarrow 1) + 2) \Rightarrow (u^2 - 2u + 2)(u-1 + 1-u) \Rightarrow 0$$

? سوال اولی $\frac{b}{r} - k$ و $f - g = \{(1, k)\}$ و $g(x) = \sqrt{b - rx} + k$ ، $f(x) = \sqrt{rx - a} + k - 1$ می

$$g(x) \xrightarrow{\text{if } x=1} \sqrt{b-r} + k \quad r\sqrt{r-a} + k - 1$$

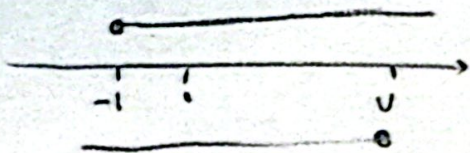
$$f(x) \xrightarrow{\text{if } x=1} \sqrt{r-a} + k - 1$$

? سوال دومی $m+n$ و $f - g(x) = \frac{c\sqrt{r}}{\sqrt{n}}$ ، $D_{fg} = [-1, 7]$ می $g(x) = \sqrt{rx + r}$ ، $f(x) = \sqrt{m - rx} + n$ و $\frac{r}{x} > -1 \rightarrow x > -1$

$$g(r) = \sqrt{r+r} = \sqrt{2r} = r\sqrt{r}$$

$$f = c\sqrt{r} - r\sqrt{r} \Rightarrow f = \frac{c\sqrt{r}}{\sqrt{n}} \Rightarrow f(r) = \frac{c\sqrt{r}}{\sqrt{n}} \Rightarrow \sqrt{m-r} + n = \frac{c\sqrt{r}}{\sqrt{n}}$$

$$r+n = \frac{c\sqrt{r}}{\sqrt{n}} \rightarrow n = \frac{c\sqrt{r}}{\sqrt{n}} - r \rightarrow n = r(2\sqrt{r}-1)$$



$m=7$ و $n=7$ و $r=1$ و $f-g(x) = \frac{c\sqrt{r}}{\sqrt{n}}$ و $D_{fg} = [-1, 7]$

$$[-1, 7]$$

$$\boxed{r + r(2\sqrt{r}-1)}$$