

$$f(u) = (u+1)^r + (ru-1)^r + mu^r + nu + mn$$

-1

$$10u^r + mu^r - \epsilon u + nu + r + mn$$

$$m+n+p+k$$

$$-10 + \epsilon - 11 + 19 = -\frac{1}{2}$$

$$m = -10, n = +\epsilon$$

$$g(u) = \{(\epsilon, -10), (\epsilon, p+1), (p+r, -1), (-r, p+k)\}$$

$$p = -11, p+1 = -10, p+k = -1, -m+k = -1, k = +10$$

$$الف) y = \sqrt{\frac{u-r}{(u^r-\epsilon)(u^r+r)}} \rightarrow r$$

$$Df: (-r, +\infty) - \{r\} - r$$

$$Df: \mathbb{R} - (-r, 2r]$$

$$ب) f(u) = \frac{ru^r+1}{\epsilon-r(u)} \quad \epsilon-r[-u] \neq 0 \quad r[-u] \neq \epsilon$$

$$-r < u \leq -r \Leftrightarrow [-u] \neq r$$

$$الف) y = \sqrt{x(u^r-1)} \quad \frac{-1}{r} + \frac{1}{r} + \frac{1}{r} \quad u \geq 1 \quad -1 \leq u \leq 0$$

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$$If u > 0 \Rightarrow ru \checkmark$$

$$If u < 0 \Rightarrow x$$

$$ب) f(u) = \sqrt{-u^r + |u-r|} \Rightarrow u \geq 0 \quad -u^r + u - r \geq 0 \quad \Delta < 0$$

$$\ominus \text{ صواب } \epsilon = ar$$

$$u \neq \pm 1 \quad |u| - 1 \quad |u| < 1 \quad -u^r - u + r > 0$$

$$Df: [-r, 0] - \{-1\}$$

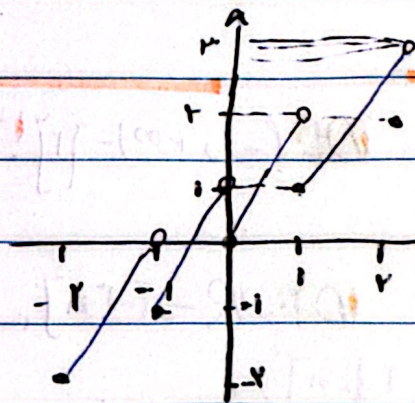
$$-r < u < -1 \quad -r < u \leq 1$$

$$||n-r|-1| = K \quad |n-r| = K+1 \quad -\varepsilon$$

$$|n-r| = 1$$

$$\swarrow \searrow$$

$$n=r \quad n=r+1$$



$$-r < n < -1 \Rightarrow y = rn \quad y = rn - [n] \quad -\Delta$$

$$-1 < n < 1 \Rightarrow y = rn - 1$$

$$1 < n < r \Rightarrow y = rn + 1$$

$$-r < n < -1 \Rightarrow y = rn + r$$

$$\text{" } \mu \text{ } |a = -1| \Rightarrow \frac{(n-r)(n-1)}{(n-r)} + b \Rightarrow f(n) = \frac{(n-r)(n-1) + b}{n-r} \quad n+r$$

$$n-r+b = n \quad \boxed{b = +r} \rightarrow a-b = -\varepsilon$$

$$\text{" } \mu \text{ } |a = -r| \Rightarrow \frac{(n-r)(n-1)}{(n-r)} + b = n \Rightarrow \boxed{b = +1} \rightarrow a-b = -\varepsilon$$

$$\frac{n^r + rn^r - n - r}{n^r - 1} = n + c \quad \frac{n^r(n+r) - (n+r)}{n^r - 1} = \frac{(n^r - 1)(n+r)}{(n^r - 1)(c-r)} \quad -V$$

$$n=1 \Rightarrow n+r = r = \frac{a+r}{1+b} \quad r+rb = a+r$$

$$n > -1 \Rightarrow n+r = 1 = \frac{r-a}{b-1} \quad b-1, r-a$$

$$\begin{cases} a-rb = 1 \\ +a-b = -r \\ -\varepsilon b, -r \end{cases} \quad \boxed{b = +1/r}$$

$$a = \frac{r}{r} = 1 \quad \boxed{a = +1/r}$$

$$b+c = r + 1/r = \frac{r^2+1}{r}$$

$$r \neq g(1), k$$

-k

1

$$r \sqrt{a - \frac{b}{r}} + r k - r - \sqrt{b - \varepsilon} - r/k = k$$

$$a = \frac{\varepsilon}{r}$$

$$b = \varepsilon$$

$$rk = -r$$

$$k = -1$$

$$ra = \frac{b}{r} + k, \varepsilon = r + 1, \underline{r}$$

$$f = g(r) = 4\sqrt{r} \quad Df \cdot g = [-1, v] \quad g(u) = \sqrt{u+r}, f(u) = \sqrt{m-u} + n$$

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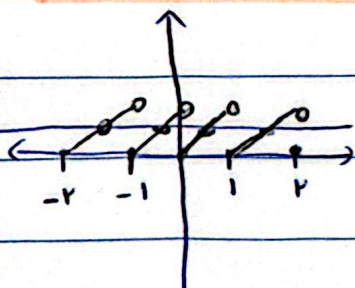
$$| -g(r) \quad \begin{matrix} \text{ } \\ \text{ } \end{matrix} \quad Df \cap Dg \quad u \geq -1 \quad u \leq v \quad |$$

$$f(r) = n + r + r - r\sqrt{r} = 4\sqrt{r}$$

$$m - u \geq \underline{m = v}$$

$$n = 4\sqrt{r} - \varepsilon$$

$$m + n = 4\sqrt{r} - \varepsilon + v = 4\sqrt{r} + r$$



$$\Rightarrow \frac{1}{y} = \frac{1}{r}$$

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