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$$f(m) > n-1 \xrightarrow{\text{if}} [m] > r \rightarrow n > \omega \rightarrow \quad (1)$$

$$r(m-1) > n-1 \rightarrow m \geq 0 \Rightarrow m \geq \omega$$

$$\text{if } [m] \leq r \rightarrow m < \omega \rightarrow f(m+r-m+1) \geq 0 \rightarrow m \geq -\frac{r}{p} \rightarrow$$

$$Df = [-\frac{r}{p}, +\infty)$$

$$y = \frac{r(1m^r + 1r m^r + 1(m+1))}{(r(m+1))^r} = \frac{r(1m+1)^r}{(r(m+1))^r} = \frac{r}{r(m+1)} \rightarrow m \neq -\frac{1}{r} \quad (2)$$

$$Df = \mathbb{R} - \left\{-\frac{1}{r}\right\}$$

$$f(m) = \frac{m^r(m+r) - (m+r)}{m^r-1} \quad m \neq \pm 1 \rightarrow \frac{(m+r)(m^r-1)}{m^r-1} = m+r \quad (3)$$

$$\frac{am+r}{m+b} \quad m = \pm 1 \rightarrow g(m) = m+c \quad \frac{a+r}{b+1} = r$$

$$\frac{-a+r}{b-1} = 1 \quad r b + r = a+r \quad r b - a = -1 \quad -a+r = b-1$$

$$r = b+a \rightarrow \begin{cases} r b - a = -1 \\ a+b = r \end{cases} \rightarrow r b = r \rightarrow b = \frac{1}{r} \quad a = \frac{\omega}{r}$$

$$b+c = r, \omega$$

$$f(x) = \frac{n+1}{n-c} = \frac{m^r-1}{m^r+am+b} = \frac{(m+1)(m-1)}{(m-1)(m-c)} \quad (4)$$

$$R - \{1\} \hookrightarrow C=1 \quad D = \mathbb{R} - \{1, c\}$$

$$(m-1)^r = m^r + am + b$$

$$a = -r, b = 1$$

$$a+b+c = 0$$

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$$r^2 a - \frac{b}{r} - k = r - r + 1 = r^2$$

$$r f(1) - g(1) = r k - r - r^2 k = -k - r = k \rightarrow k = -1$$

$$f(m) = \sqrt{m-m} + n \quad g(n) = \sqrt{n+n} \quad (10)$$

$$Df_V = [-1, V] \quad f-g(r) = 4\sqrt{r} \quad m+n=?$$

$$\hookrightarrow Df \cap Dg = [-1, V] \quad \{m+n = \sqrt{4}\sqrt{r} - r \Delta V = 2 + \sqrt{4}\sqrt{r}\}$$

$$r+m+r \geq 0 \rightarrow m \geq -1 \rightarrow [-1, +\infty)$$

$$m-m \geq 0 \rightarrow m \leq m \rightarrow m=V \rightarrow (-\infty, V]$$

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

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

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$$f(m) = (m-r)^r (m-1) \quad g(m) = f(m+1) + f(1-m) \quad (3)$$

$$(m-r)^r m + (-m-r)^r (-m) = m^r - r m^{r-1} + r m - m^r - r m^{r-1} - r m =$$

$$(m^r - r m^{r-1} + r m) + (m^r + r m^{r-1} - r m) = -1 m^r$$

$$f(1-rm) = \begin{cases} \sqrt[r]{m} + r & m \leq 0 \\ r\sqrt[r]{m} & m > 0 \end{cases} \quad (4)$$

$$1-rm = -1 \rightarrow m = 1 \xrightarrow{m > 0} r\sqrt[r]{1} = r \quad f(1-1) + f(r) = 0$$

$$1-rm = r \rightarrow m = -1 \xrightarrow{m \leq 0} \sqrt[r]{-1} + r = 1$$

$$f(m+\sqrt{m}) = m^r + r m \quad (5)$$

$$\text{if } m = r \rightarrow r + \sqrt{r} = 4 \rightarrow m^r + r m = r 4 r$$

$$m + \sqrt{m} = 4 \rightarrow \sqrt{m} = 4 - m \rightarrow m = r 4 + m^r - 1 r \rightarrow$$

$$m^r - 1 r m + r 4 = 0 \rightarrow (m-r)(m-4) = 0$$

$$r + \sqrt{r} = 4 \leftarrow m = r \quad m = 4 \times \rightarrow 4 + \sqrt{4} \neq 4$$

$$f(m-1) + f(1-m) = 0 \quad f(m) = m^r + m = m(m+1)(m-1) \quad (1)$$

$$f(m-1) = (m-1)(m)(m-r)$$

$$f(1-m) = (-m+1)(-m+r)(-m) = -(m-1)(m-r)(m)$$

$$f(m-1) + f(1-m) = (m-1)(m)(m-r) - (m-1)(m-r)(m) = 0$$

(4)

$$f(m) = \sqrt[r]{r m - r a} + 1 < -1 \quad g(m) = \sqrt[r]{b - r m} + r K$$

$$r f - g = \{(1, K)\} \quad r a - \frac{b}{r} - 1 < ?$$

$$r a - r a \geq 0 \quad -r a > -r m \rightarrow \frac{r a}{r} \leq m$$

$$b - r m \geq 0 \rightarrow r m \leq b \rightarrow m \leq \frac{b}{r}$$

$$1 = \frac{r a}{r} \rightarrow a = \frac{r}{r} \quad , \quad \frac{b}{r} = 1 \rightarrow b = r$$

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