

$$f(x) - x + 1 = \begin{cases} x & ; [x] > r \equiv x > r \rightarrow x \rightarrow +\infty \\ rx + \frac{1}{r} & ; [x] \leq r \equiv x < r \rightarrow rx + \frac{1}{r} = 0 \\ & \quad \quad \quad \hookrightarrow x = -\frac{1}{r} \end{cases}$$

$[-\frac{1}{r}, r)$

$\rightarrow D_f = [-\frac{1}{r}, +\infty)$

$$\frac{r(1x^r + rx + x + 1)}{(rx + 1)^r} = \frac{r(rx + 1)^r}{(rx + 1)^r} = \frac{r}{rx + 1}$$

$D_f = \mathbb{R} - \{-\frac{1}{r}\}$

$$f(x) = \begin{cases} (x-1)(x^r + rx + 1)(x+1)(x+r) & (x+r) \rightarrow C=r \\ \frac{ax+r}{x+b} & x \neq -1 \\ \frac{ax+r}{x+b} = x+r & \begin{cases} \frac{a+r}{b+1} = r \\ \frac{r-a}{b-1} = 1 \end{cases} \end{cases}$$

$b = \frac{1}{r}$
 $b+c = \frac{d}{r}$

$\rightarrow g(x) = f(x) \rightarrow \frac{(x+1)(x-1)}{x^r - 1} = \frac{x+1}{x-c} \rightarrow f(x) = 0 \rightarrow x = -1 \vee x = 0$
 $g(x) = 0 \rightarrow x = (-1) \vee x = 0$

$g(x) = \frac{(x-1)(x+1)}{(x-1)(x-c)} = \frac{x+1}{x-c}$
 $\rightarrow f(x) = \frac{x+1}{x-c}$

$C=1$
 $a = -c-1$
 $b = c$
 $a+b+c = 0$

$$g(x) = (x-r)^r(x) \cdot (x+r)^r(x) = x \left(\frac{-1x}{(x-r)^r - (x+r)^r} \right) = -1x^r$$

$$\left. \begin{aligned} f(-1) &= r \\ \downarrow \\ n &= 1 \end{aligned} \right\} \textcircled{a}$$

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

$$\downarrow$$

$$r = -1$$

$$x + \sqrt{x} = 9 \rightarrow x^r - 1r x + r^r = x \quad \text{m) p}$$

$$\rightarrow x^r - 1r x + r^r = -$$

$$m^r + r^r \leftarrow \textcircled{f} \rightarrow 9x$$

$$= 1841r$$

$$= \textcircled{1841}$$

$$f(n) = n(\alpha^r + 1)$$

$$\hookrightarrow \text{مربع} \rightarrow f(n-1) = f(1-n) \rightarrow f(n-1) + f(1-n) = 0 \quad 1$$

~~$$f(n-1) + f(1-n) = r f(n-1) + (n-1)(r^r + 1)$$~~
~~$$f(n-1) = n^r - 1r n + r^r = n^r - 1r n + r^r + f(n-1) = (n^r - 1r n + r^r + f(n-1))$$~~

$$D \quad f \circ g = \{1\} \rightarrow b - f n = - (f x - f a) \stackrel{(n=1)}{=} 0$$

$$\hookrightarrow b = r \quad , \quad r k - r - r k = k$$

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

$$\boxed{k = -1}$$

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

$$D_g = \left[\frac{1}{2}, +\infty \right) \rightarrow D_f = (-\infty, \frac{1}{2}]$$

$$m - r = 0 \rightarrow m = r$$

$$(f - g)(r) = \sqrt{r} \rightarrow r + n - \sqrt{r} = 9\sqrt{r} \rightarrow n = \underline{8\sqrt{r} - r}$$

$$\rightarrow m + n = 8\sqrt{r} + 0$$