

$f(1) = 1$
 $f(2) = 9$

$f(x) = r^{Ax+B} \Rightarrow f(1) \Rightarrow r^{A+B} = 1$
 $A+B = 0$

$f(2) \Rightarrow r^{2A+B} = 9 \Rightarrow 2A+B = 2$
 $2A = 2 \Rightarrow A = 1$
 $B = -1$

$f(0) = r^{-1} \Rightarrow \frac{1}{r}$

$f(x+1) = x+3 \Rightarrow r^{x+3} = x+3$
 $t^2 - 1t + 1 = 0 \Rightarrow$
 $(t-3)(t-1) = 0 \Rightarrow t = 3$
 $r^x = 3$
 $r^x = 1$

$x = \begin{cases} \log_r 3 \\ \log_r 1 \end{cases}$

$(f_{r1})^2 + f_{r1} f_{r1} = (f_{r1})^2 + f_{r1} f_{r1} \Rightarrow$
 $(f_{r1})^2 + (f_{r1}^2 + f_{r1}^2)(f_{r1}^2 + f_{r1}^2) \Rightarrow (f_{r1})^2 + (f_{r1}^2 + 1)(1 + f_{r1}^2) \Rightarrow$
 $(f_{r1})^2 + (1 - f_{r1}^2 + 1)(1 + f_{r1}^2) \Rightarrow (f_{r1})^2 + 2(f_{r1}^2) = 4$

$f(x^2 - 2x + 1) + 2f(1-x) = 2 \Rightarrow f(x-1)^2 + 2f-(x-1) = 2$
 $f(-x) = ?$
 $1 \cdot 2 = -(x-1)^2 (x-1)^2 \Rightarrow -1 = (x-1)^2 \Rightarrow$
 $-1 = x-1 \Rightarrow x = -9$

$f(-x) \Rightarrow f^9 \Rightarrow f^9 \Rightarrow 9$

$f(x^2 - 2x + 1) + f(x-2) = 3 \Rightarrow f(x^2 - 1) = 3 \Rightarrow x^2 - 1 = 1$
 $x^2 = 2 \Rightarrow x = \sqrt{2}$
 $f^{\sqrt{2}} \Rightarrow f^{\sqrt{2}} \Rightarrow f^{\sqrt{2}} \Rightarrow \frac{2}{\sqrt{2}} = \sqrt{2}$

$f^{\sqrt{2}} = ?$

$$f(x-x) - f\left(\frac{1}{(x-x)^r}\right) = r \Rightarrow f\left(\frac{x-x}{(x-x)^r}\right) = r \Rightarrow f-(x-x)^r = r \Rightarrow$$

$$f\left(\frac{-x}{r}\right) = ? \quad 10^r = -(x-x)^r \Rightarrow -10 = x-x \Rightarrow \boxed{x = -1}$$

$$f\left(\frac{-x}{r}\right) \Rightarrow f\frac{1}{r} \Rightarrow f\frac{r}{r} = \frac{r}{r} = \boxed{1}$$

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$$f\left(\frac{x-x}{4}\right) = ? \quad x^{r-2} = \Delta \Rightarrow x^{r-2} = \epsilon x \Rightarrow x^r - \epsilon x - r = 0$$

$$\Delta = 4\epsilon \Rightarrow x < \frac{\epsilon + \sqrt{4\epsilon}}{2} = \frac{\epsilon + 2\sqrt{\epsilon}}{2} = \epsilon + \sqrt{\epsilon} \checkmark$$

$$\frac{\epsilon - \sqrt{4\epsilon}}{2} = \frac{\epsilon - 2\sqrt{\epsilon}}{2} = \epsilon - \sqrt{\epsilon} \text{ غير صحيح}$$

$$f\left(\frac{x-x}{4}\right) \Rightarrow f\left(\frac{\epsilon + \sqrt{\epsilon} - r}{4}\right) = f\frac{\sqrt{\epsilon}}{4} = f\frac{\epsilon}{4} = \boxed{\frac{1}{4}}$$

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

$$f\frac{1}{11} = ? \quad \frac{f_r \times f_r \times f_r}{f_r \times f_r \times f_r} = f_r^r \times f_r^r = \frac{a}{\lambda} \times \frac{a}{\lambda} = \boxed{\frac{2a}{\lambda}}$$

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$$f\frac{r}{\epsilon} = 0, 1 \Rightarrow \frac{1}{r} f\frac{r}{\epsilon} = 0, 1 \Rightarrow \boxed{f\frac{r}{\epsilon} = 1, r}$$

$$f\frac{r}{r} = ? \quad f\frac{r}{r} = \frac{1}{f\frac{r}{r}} = \frac{1}{f\frac{r}{r} + f\frac{r}{r}} = \frac{1}{\frac{1}{f\frac{r}{r}} + 1} = \frac{1}{\frac{1}{\frac{a}{r}} + 1} = \frac{1}{\frac{a}{r} + 1} \Rightarrow \boxed{\frac{r}{a+r}}$$

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$$a(f_r) x^r + a x + b f_r = 0 \quad \text{بما ان} \quad \begin{pmatrix} -1 \\ -\frac{c}{a} \end{pmatrix}$$

$$a = a(f_r) + b f_r \Rightarrow a = f_r (a+b) \Rightarrow f_r = \frac{a}{a+b} \text{ بطلب}$$

$$f\frac{10}{r} = \frac{a+b}{a} = 1 + \frac{b}{a} \Rightarrow f\frac{10}{r} - 1 = \frac{b}{a} \Rightarrow \boxed{f\frac{a}{r} = \frac{b}{a}}$$

$$(f_r)^{\frac{b}{a}} = r^{\frac{1}{r}} \times \frac{b}{a} = r^{\frac{1}{r}} f\frac{a}{r} = a^{\frac{1}{r}} = \boxed{\sqrt[r]{a}}$$

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