

1 \wedge 1 ω

$x = a \rightarrow a^r + pa = a^r - \epsilon \rightarrow -\epsilon = pa \rightarrow a = -r$

-1

$\frac{ax^r + a}{rx - b} \xrightarrow{r, r} \frac{r+a}{r-b} = r \rightarrow r - rb = \epsilon + a \quad a = 1 - rb \rightarrow a = 1 + r = 11$

2

$g = rx + b \xrightarrow{r, r} r = r+1 \rightarrow b = 1 \rightarrow f(1) = \frac{1+11}{r} = \frac{r}{r} = \epsilon$

$Df = R - f^{-1}, \epsilon \} \rightarrow -1, \epsilon =$ (مربع)

3

$(x+1)(x-\epsilon) = x^2 - rx - \epsilon \xrightarrow{x^2} rx^2 - 4x - 1$

$f(x) = \frac{\epsilon x + 1}{rx^2 - 4x - 1} \rightarrow f(1) = \frac{\epsilon + 1}{r - 4 - 1} = \frac{-\epsilon}{r}$

5

$\xrightarrow{-1} \rightarrow (x+1)^r = x^r + rx + 1 \xrightarrow{x-\epsilon} -\epsilon x^r - \frac{1}{r} x - \epsilon$
 $a + b = -1 - \epsilon = -1r$

4

$\frac{x^r + mx + 1}{(x-1)(x-1)} \xrightarrow{mb} m^r - \epsilon < 0 \rightarrow -r < m < r$ I
 $m^r < \epsilon \rightarrow -r < m \leq r$ II
 $m \in (-r, r)$
 $(x-1)^r = x^r + mx + 1$
 $x^r - rx + 1 = x^r + mx + 1$
 $m = -r$ II

5

$\sqrt{r - \frac{1}{x^r}} = \sqrt{(\frac{r-1}{x})(\frac{r+1}{x})} \rightarrow (\frac{r-1}{x})(\frac{r+1}{x}) > 0$
-k +k
+ - +
 $D_f = (-\infty, -\frac{1}{r}] \cup [\frac{1}{r}, +\infty)$

4

$$mx^p + pmx + 1 > 0 \rightarrow$$

نص: $\frac{1}{p}$

1, 1, 2

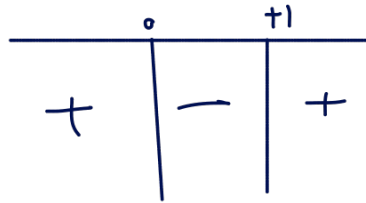
- 1

$$m > 0,$$

$$\Delta < 0$$

$$pm^p - em < 0$$

$$em(m-1) < 0$$



$$m = [0, 1]$$

$$\frac{px^p - 1}{px - 1}$$

$$x \neq a \rightarrow$$

$$a = \frac{1}{p}$$

1

$$\frac{(px-1)(px+1)}{(px-1)} = px+1$$

- 1

$$g(x) = px \frac{1}{p} + 1 = x + 1$$

$$px+1 = \varepsilon \left(\frac{1}{p}\right) + k = \varepsilon \left(\frac{1}{p}\right) + 1$$

$$p+k = \varepsilon \rightarrow k = 0 \rightarrow a+k = \frac{1}{p}$$

$$\frac{px^p - \varepsilon}{px + p} = \frac{(px-1)(px+1)}{px+p} = px-1$$

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$$x=0 \rightarrow f(x) = -1, g(x) = b \rightarrow b = -1$$

$$a-b = 1 - (-1) = 2$$

$$\forall a, x+1 = px-1 \rightarrow pa - \frac{1}{p} + 1 = px - \frac{1}{p} - 1 \rightarrow -pa + 1 = -\frac{1}{p} - 1 \rightarrow -pa = -\frac{1}{p} - 2 \rightarrow pa = \frac{1}{p} + 2$$

1

$$\frac{x^p - \varepsilon}{x - p} = x + p$$

نص: 1, 1, 2

- 10

$$\text{if } x = p \rightarrow g(x) = p+p = 2\varepsilon$$

$$f(x) = pa^p + ka \rightarrow pa^p + ka = 2\varepsilon$$

$$pa^p + ka - 2\varepsilon = 0 \xrightarrow{\div \varepsilon} a^p + a - 2 = 0$$

$$(a-1)(a+2) = 0$$

$$a = 1 \rightarrow p - p = 0$$

