

$$a^r + \tau a = a^r - f$$

$$\boxed{a = -\tau}$$

$$r = r + b$$

$$b = -1$$

$$f(x) = \frac{x^r + a}{\tau x + 1} \xrightarrow{(r, \tau)} r = \frac{r+a}{\omega} \rightarrow a = 11$$

$$f(x) = \frac{x^{r+11}}{\tau x + 1} \xrightarrow{f(1)} = \frac{1^r}{\tau} = \boxed{r}$$

$$(x+1)(x-r) = x^r - \tau x - r^r = \tau x^r - \tau x - 1$$

$$f(x) = \frac{\tau x + 1}{\tau x^r - \tau x - 1} \xrightarrow{f(1)} \frac{\tau + 1}{\tau - \tau - 1} = \boxed{\frac{-\omega}{1\tau}}$$

$$(x+1)^r = x^r + \tau x + 1^{r-r} = -\tau x^r - 1x - r$$

$$a + b = -1 - r = \boxed{-1\tau}$$

① $\Delta < 0$

$$m^r - r < 0$$

$$m^r < r$$

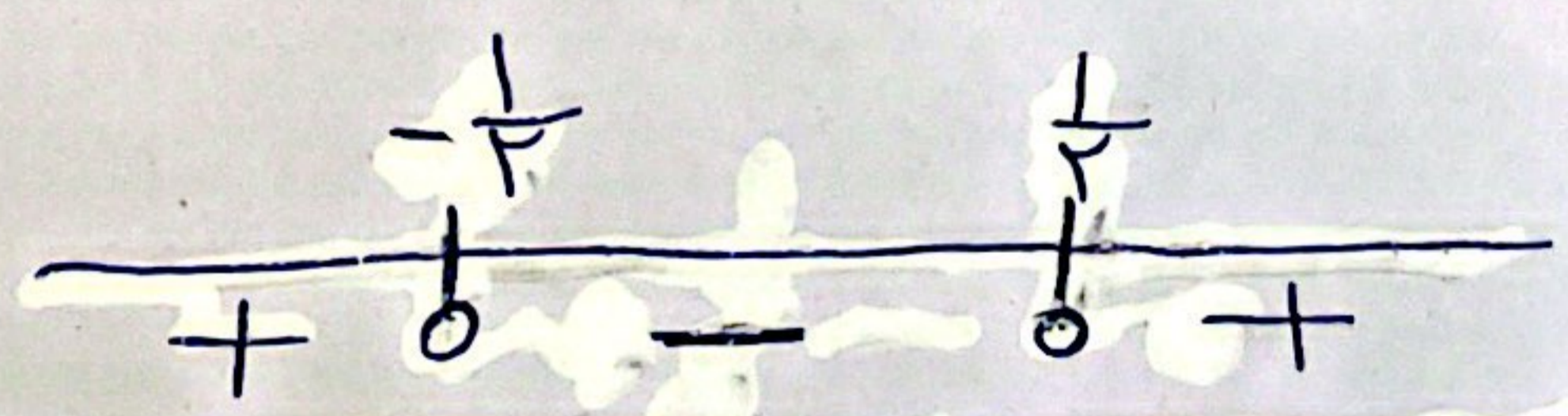
$$\boxed{-\tau < m < \tau}$$

② $x^r + mx + 1 = (x-1)^r \rightarrow m = -\tau$

$$1 \cap \tau = m = [-\tau, \tau]$$

$$\sqrt{f - \frac{1}{x^r}} \rightarrow x \neq 0$$

$$x = \pm \frac{1}{r} \rightarrow \dots = 0$$



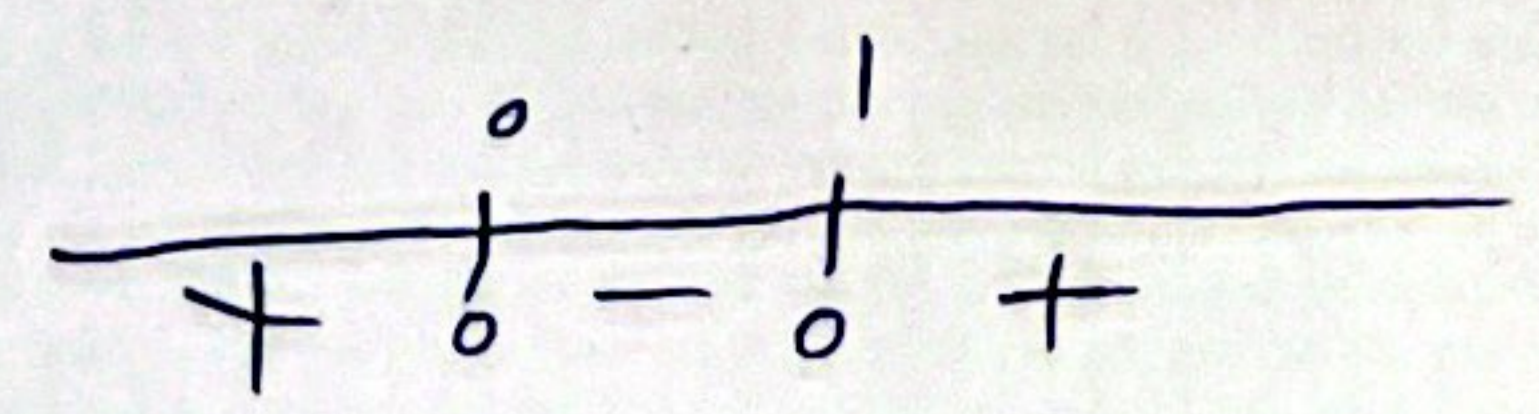
$$\boxed{D_f = (-\infty, -\frac{1}{r}] \cup [\frac{1}{r}, +\infty)}$$

$\Delta \leq 0$

$$f m^r - f m \leq 0$$

$$f m(m-1) \leq 0$$

$$m = 0, 1$$



$$\boxed{D = [0, 1]}$$

①

②

③

④

⑤

⑥

⑦

$$D = \mathbb{R}$$

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

$$r = r + k$$

$$k = 0$$

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

$$-ra + r = -r - r$$

$$-ra = -r - r \rightarrow a = r$$

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

$$r = ra + b \div r$$

$$a + a - r = 0$$

$$(a+r)(a-r) = 0$$

$$a = -r, 1$$

$$a - b = r + r = 2r$$

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$$(a + \frac{1}{r}) \cdot (a - \frac{1}{r}) = 0$$