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$$y = \frac{k+r}{k+r+1} \quad \text{--- (1)}$$

$$P_f = R - \left\{1, \frac{1}{r}, -r\right\}$$

$$y = \frac{k+r}{k+r+1} \quad \text{--- (2)}$$

$$P_f = R - \left\{-\frac{1}{r}, -r, -1\right\}$$

$$y = \frac{k+r}{k+r+1} \quad \text{--- (3)}$$

$$P_f = R - \left\{1, \frac{1}{r}, -r\right\}$$

$$y = \frac{r}{k+r+1} \quad \text{--- (4)}$$

$$P_f = R - \left\{1, \frac{1}{r}, -r\right\}$$

(۴)

الف) $y = \frac{n+1}{|n_{k+1}| - |n+1|}$

$|n_{k+1}| - |n+1| \neq 0 \Rightarrow |n_{k+1}| \neq |n+1|$

$n_{k+1} + 1 + \varepsilon_n \neq n_{k+1} + 1 + \varepsilon_n \rightarrow n_{k+1} - n - 1 \neq 0 \rightarrow n_{k+1} - n - 1 \neq 0 \rightarrow n_{k+1} - n - 1 \neq 0$

ب) $y = \sqrt{|n_{k+1}| - |n+1|}$

$|n_{k+1}| - |n+1| \rightarrow |n_{k+1}| - |n+1| \rightarrow |n_{k+1}| > |n+1|$

$n_{k+1} + 1 + \varepsilon_n \neq n_{k+1} + 1 + \varepsilon_n \rightarrow n_{k+1} - n - 1 \neq 0 \rightarrow n_{k+1} - n - 1 \neq 0$

الف) $1 - \log \frac{n}{p} > 0$

ب) $\log \left(1 - \log \frac{1}{p} \right) \rightarrow n > 0, 1 - \log \frac{1}{p} > 0$

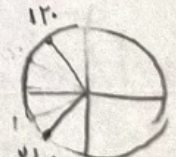
$f(n) = \sqrt{\log \frac{1}{2} \log \frac{1}{2}}$

$\log \frac{1}{2} \log \frac{1}{2} > 0 \rightarrow \log \frac{1}{2} \log \frac{1}{2} > 0$

$P_f = [1, p]$

الف) $(\cos \frac{1}{2} + 1) \rightarrow \cos \frac{1}{2} + 1 \rightarrow \cos \frac{1}{2} + 1$

$P_f = \left\{ \frac{1}{p}, \frac{1}{p} \right\}$



ب) $y = \sqrt{\log \frac{1}{2}}$

$\log \frac{1}{2} > 0 \rightarrow \log \frac{1}{2} > 0$

$$f(u) = \sqrt{a+ru+u^2+b}$$

! need to be

$$\rightarrow a+r=0 \rightarrow a=-r$$

$$\underbrace{-r \times r}_{-4} + b = 0 \rightarrow \boxed{b = +4}$$

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(1)

$$f(u) = \sqrt{u^2 + ru + r - m^2}$$

$$\Delta \geq 0 \rightarrow F - F(r - m^2) \geq 0 \rightarrow F - 1 + F m^2 \geq 0$$

$$F m^2 - \varepsilon \geq 0 \rightarrow F m^2 \geq \varepsilon \rightarrow m^2 \geq \frac{\varepsilon}{F} \rightarrow 1 < m < 1$$

$$1 - (-1) \leq \sqrt{r}$$

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(4)

$$f(u) = \sqrt{\varepsilon - u^2}$$

$$\rightarrow \varepsilon - u^2 \geq 0 \rightarrow u^2 \leq \varepsilon \rightarrow -\sqrt{\varepsilon} \leq u \leq \sqrt{\varepsilon}$$

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$$\boxed{\varepsilon - u^2}$$

(10)