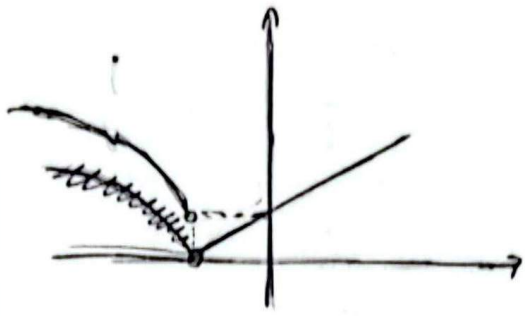




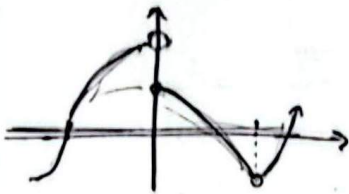
$$a = \begin{cases} y-1 & y \geq 0 \\ -y^r & y < 0 \end{cases}$$

$$y = \frac{x+1}{r} \rightarrow y \geq 0 \quad x \geq -1$$

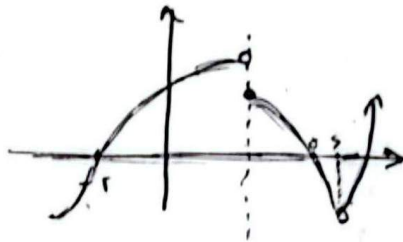
$$x = -y^r$$

$$\sqrt{-x} = y$$

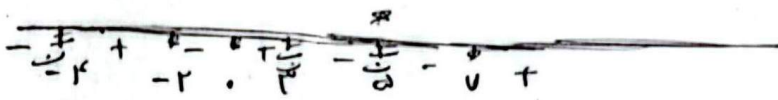
$f(x)$



$f(x-r)$



(v)



$$\frac{x f(x-r)}{f(x)}$$

$$(-1/r, -r] \cup [0, r) \cup [r, +\infty) = P_g$$

$$f(x) = \frac{r_n^r - r_n + r}{x(x^r - r)} \sim \frac{x(x-r)(x+r)}{x(x-r)(x+r)}$$

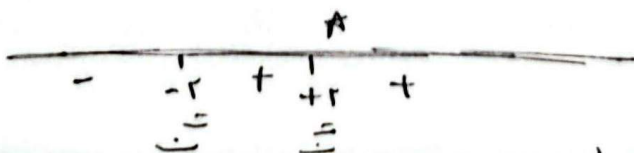


(v)

$$\mathbb{R} - \{-r, \dots, r\}$$

$$(-r, 0) \cup (r, +\infty)$$

$$y = \sqrt{\frac{x-r}{x^r - r x^r - 1}} \sim (x^r - r)(x^r + r) = (x-r)(x+r)(x^r + r)$$



$$P_f = (-r, +\infty) - \{r\}$$

(v)

$$y = \frac{r^2 + 1}{r - r[-2]}, \quad r \neq r[-2]$$

$$r \neq [-2]$$

$$r, -2 < r$$

$$\boxed{-2 > r > -\infty}$$

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

$$r \leq 0 \Rightarrow$$

$$r > 0 \Rightarrow r_2$$

$$\rho_f \in [1, +\infty)$$

$$f(r) = \frac{\sqrt{|r-1| - r^2}}{|r| - 1}$$

$$|r| = 1 \rightarrow r = \pm 1$$

$$(r-1)/(r+1)$$

$$r > 1: r-1-r^2 = -(r^2-r+1)$$

$$r < 1: 1-r-r^2 = -(r^2+r-1)$$

$$(r+1)(r-1)$$

$$y = \sqrt{|r-1| [r-1]}$$

$$\rho_f = \mathbb{R}$$

$$y = \sqrt{|r-1| [r-1]}$$

$$\rho_f = [1, +\infty]$$

مربعات مثبت

$$f(n) = \frac{\frac{n^2 + 3n + 2}{n^2 + 2n + 1}}{\frac{n+1}{n-1}} = \frac{(n+1)(n+2)}{(n+1)(n+1)} = \frac{n+2}{n+1}$$

1

$$-19 - 2, 1 \rightarrow n = 3$$

$$n^2 - 4n + 9 = 0 \Rightarrow (n-3)^2 = 0$$

نصف السيف دار

$$y = \log_{n+1} \left(\log_{\frac{1}{n}} \right) > 0$$

9

$$n+1 > 0$$

$$n > 0$$

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$$\log_{\frac{1}{n}} > 0 \rightarrow \frac{1}{n} > n > 1$$

$$f(r) \Rightarrow \rho_{f(r)} = [-\omega, r]$$

1.

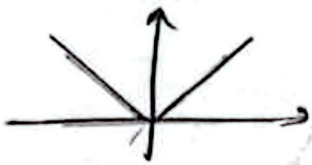
$$-\omega < r < 1$$

$$-r < r < r$$

$$r < r < r$$

$$r < r < r$$

$$y = |x|$$



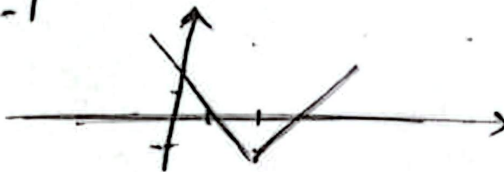
$$y = |x - r|$$



$$x = \left[-\frac{r}{\sqrt{r}}, \frac{r}{\sqrt{r}}\right]$$

2

$$y = |x - r| - 1$$



$$y = |x - r| - 1$$

