

$$y = \sqrt{n^2 - 4n^2 + 12n - 1}$$

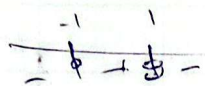
$$\Rightarrow a = -4, b = 12$$

$$y = \sqrt{(n-2)^2} = n-2 \quad \begin{matrix} n=-4 \rightarrow -1 \\ n=5 \rightarrow 1 \end{matrix}$$

$$R = [-1, 10]$$

(3)

$$\frac{n+1}{1-n} \gg 0$$



$$D = [-1, 1]$$

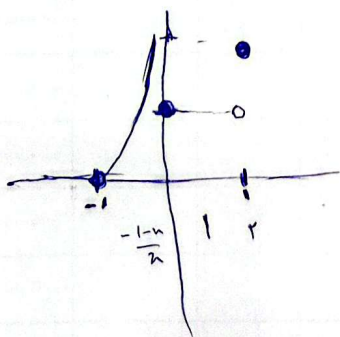
$$\lim_{n \rightarrow \infty} y_r = a$$

$$\lim_{n \rightarrow 0} y_r = -\frac{1}{b}$$

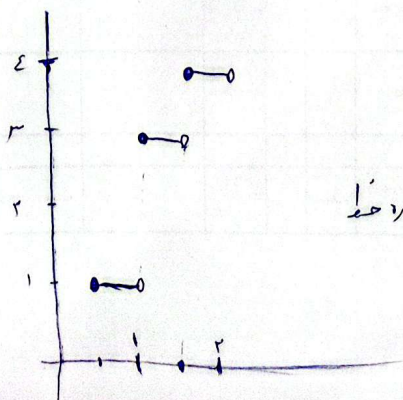
$$\frac{1}{b} = 1 \Rightarrow b = 1$$

$$a = 1$$

$$a+b=2$$



(4)



$$\lim_{n \rightarrow \infty} y_r$$

(4)

(3)

$$\lim_{n \rightarrow \infty} \frac{1}{n} = 0$$

$$f(n) = an + b$$

(1)

$$(n+1)a + b + (n+1)a + b = 2n + 2a + 2b$$

$$2an + 2a + 2b = 2n + 2a + 2b$$

$$2an + 2a + 2b = 2n + 2a + 2b$$

$$\Rightarrow a = 1$$

$$\Rightarrow b = 0$$

$$f(n) = n$$

$$y = \sqrt{n - n^2}$$

$$R_{n,n} = (-\infty, \frac{1}{2}]$$

$$\Rightarrow R_{\sqrt{n-n^2}} = [0, \frac{1}{2}]$$

(5)

$$n+2 \neq 0 \Rightarrow n \neq -2$$

$$\lim_{n \rightarrow \infty} \frac{1}{n} = 0$$

$$a = b = -2$$

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

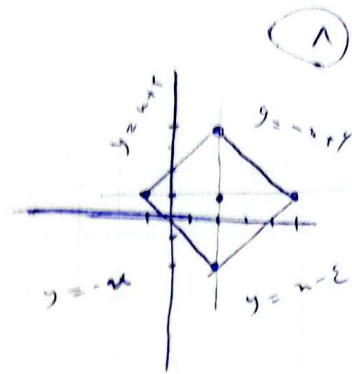
$$\Rightarrow f(n) = n^2 - 2n$$

$$n \neq -2 \Rightarrow f(n) \neq 1$$

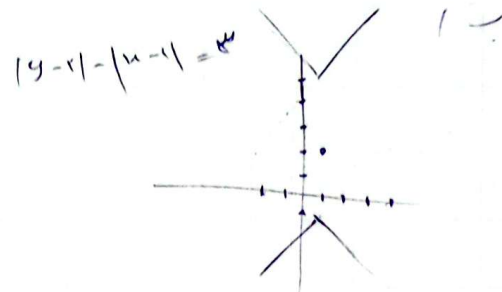
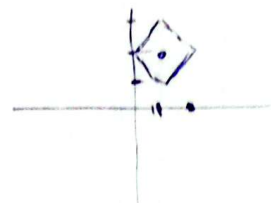
$$R(n^2 - 2n) = [-1, \infty)$$

$$\Rightarrow c = -1$$

$$f\left(\frac{-r-1}{-r}\right) = (r)^2 - r(r) = 0$$



(1.1) ②



③

$$\begin{aligned} & \text{if } x \geq \frac{b}{a} \quad (r+a)x + b \\ & \text{if } x < \frac{b}{a} \quad (r-a)x - b \end{aligned}$$

$$(r+a)(c-a) \geq 0$$

$$q - ar \geq 0$$

$$\Rightarrow r \leq a \leq r$$