

$x = 1$ سے

⑤ 1

$$x=2 \rightarrow \underline{5}, \underline{1}, \underline{4}, \underline{2}$$

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1

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0.8

$y = \max(0, x-1)$

$$f(x) = [1-x-|x+1|]$$

$$1-x+x+\varepsilon = \omega$$

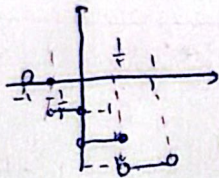
$$\begin{cases} 1-x- \\ x- \\ x-1 \end{cases}$$

$$x-1-x-\varepsilon \Rightarrow R = [-\omega, \omega] = \left\{ \begin{matrix} 1, 2, 3, 4, \omega, -1, 2 \\ 0, -1, -2, -3, -4, -\omega \end{matrix} \right\}$$

$$\begin{matrix} x = -1 \rightarrow y = \omega \\ x = 1 \rightarrow y = -\omega \end{matrix}$$

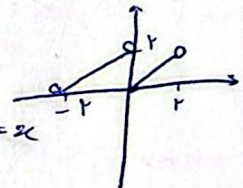
$$\begin{aligned} \text{ب) } \frac{1}{x} - \left\lfloor \frac{x+1}{x} \right\rfloor &= \frac{1}{x} - \left\lfloor \frac{x}{x} + \frac{1}{x} \right\rfloor = \frac{1}{x} - \left\lfloor \frac{1}{x} \right\rfloor - 1 \\ 0 &\leq \frac{1}{x} - \left\lfloor \frac{1}{x} \right\rfloor < 1 \\ -1 &\leq \frac{1}{x} - \left\lfloor \frac{1}{x} \right\rfloor - 1 < 0 \quad \text{و.ج. } = [-1, 0) \end{aligned}$$

$$\text{الف) } -1 < x \leq -\frac{1}{r} \rightarrow y = 0 \quad -\frac{1}{r} < x \leq 0 \rightarrow y = -1 \quad 0 < x \leq \frac{1}{r} \rightarrow y = -2 \quad \frac{1}{r} < x < 1 \rightarrow y = -1$$



$$\text{ب) } y = x - r \left\lfloor \frac{x}{r} \right\rfloor$$

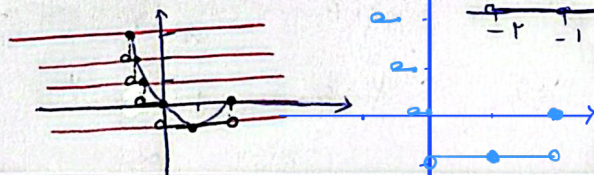
$$\begin{aligned} -r < x < 0 &\rightarrow y = x - r \left\lfloor \frac{x}{r} \right\rfloor = x + r \\ 0 < x < r &\rightarrow x - r \left\lfloor \frac{x}{r} \right\rfloor = x \end{aligned}$$



$$\text{الف) } y = [1-x-1] \quad (-1, -1) \rightarrow |x| = -x \rightarrow [1-x-1] = [-x] - 1 = 1 - 1 = 0$$

$$\begin{aligned} (-1, 0) &\rightarrow |x| = -x \rightarrow 1-x-1 = x+1 \rightarrow [x+1] = [x] + 1 = -1 + 1 = 0 & x = -1 \rightarrow y = 0 \\ (0, 1) &\rightarrow |x| = 1-x \rightarrow [1-x] = [-x] + 1 = -1 + 1 = 0 & x = 0 \rightarrow y = 1 \\ (1, 2) &\rightarrow [x-1] = [x] - 1 = 1 - 1 = 0 & x = 1 \rightarrow y = 0 \end{aligned}$$

$$\text{ب) } y = [x^2 - 2x] \quad x \in [-1, 2]$$



$$a = 0, 2 \text{ اعشار}$$

$$a + [b] = 2, 2 \rightarrow [a] + [b] = 2$$

$$b, \text{ اعشار} = 0, 4$$

$$b - [a] = 2, 4 \rightarrow [b] - [a] = 2$$

$$\begin{aligned} r[b] &= 4 \rightarrow [b] = 2 \rightarrow b = 2 + \varepsilon, \varepsilon = 2, 2 \\ [a] &= 1 \rightarrow a = 0, 2 = 1, 2 \end{aligned}$$

$$a + b = 2, 4$$

$$-1 < 1 - \sqrt{2} < 0 \quad 0 < (1 - \sqrt{2})^4 < 1 \quad (1 + \sqrt{2})^4 + (1 - \sqrt{2})^4 = 19$$

$$\rightarrow (1 + \sqrt{2})^4 = 19\sqrt{2}, \dots \rightarrow [(1 + \sqrt{2})^4] = 19\sqrt{2}$$

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