

$n=2$ (دو بار)

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

$$\beta = -\frac{1}{r}$$

$$W = -F$$

CS Scanned with CamScanner

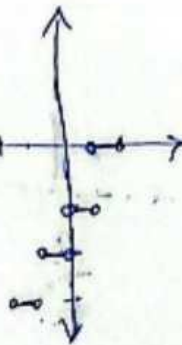
الف) $f(x) = [1-x] - [x+1]$ $\frac{-2}{4 \text{ و } 1-2x-1 = -2}$

$R_f = \{x | 0 \leq x \leq 1, x \in \mathbb{R}\}$

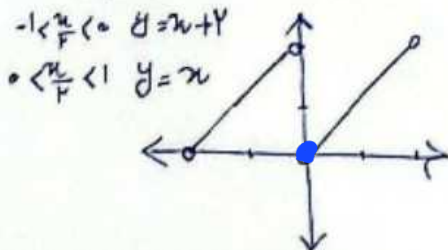
ب) $f(x) = \frac{1}{x} - \left[\frac{x+1}{x}\right] = \frac{1}{x} - \left[1 + \frac{1}{x}\right] = \frac{1}{x} - \left[\frac{1}{x}\right] - 1 =$
 $R_f = [0, 1)$

الف) $y = [-2x] - 1$

$-1 < x < 1 \rightarrow -2 < 2x < 2$
 $-2 < 2x < -1 \rightarrow y = -3$
 $-1 < 2x < 0 \rightarrow y = -2$
 $0 < 2x < 1 \rightarrow y = -1$
 $1 < 2x < 2 \rightarrow y = 0$

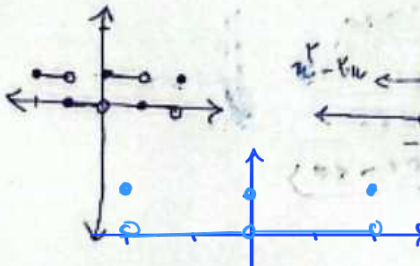


ب) $y = x - 2\left[\frac{x}{2}\right]$
 $-1 < x < 1 \rightarrow -1 < \frac{x}{2} < 1$

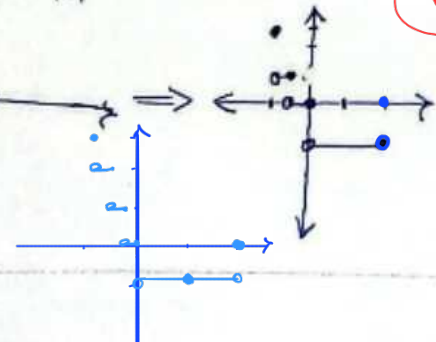
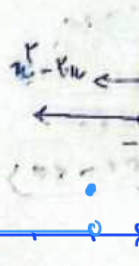


الف) $y = [1|x|-1]$ $x \in [-2, 2]$

$x = -2 \rightarrow y = 1$
 $-2 < x < -1 \rightarrow y = 1$
 $-1 < x < 0 \rightarrow y = 0$
 $0 < x < 1 \rightarrow y = 1$
 $1 < x < 2 \rightarrow y = 0$
 $x = 2 \rightarrow y = 1$



ب) $y = [x^2 - 2x]$ $x \in [-1, 1]$



$a + [b] = 7, 7 \Rightarrow [a] + [b] = 14$

$b - [a] = 7, 14 \Rightarrow [b] - [a] = 7$

$[b] = 14$
 $[b] = 14 \Rightarrow [a] = 7$

$a + 7 = 14, 7$

$a = 7, 7$
 $b - 7 = 7, 14 \Rightarrow b = 14, 14$

$a + b = 14, 14$

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

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

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

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

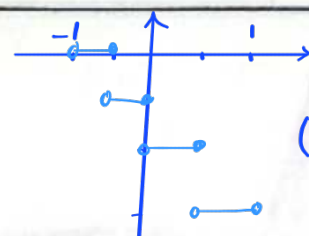
$[-(1-\sqrt{2})^4] = -1$

$[(1+\sqrt{2})^4] = 19 - 1 = 18$

$-1 < 1-\sqrt{2} < 0$

$0 < (1-\sqrt{2})^4 < 1 \Rightarrow -1 < -(1-\sqrt{2})^4 < 0$

$-\frac{1}{2} < x < -\frac{1}{4} \rightarrow -1$
 $-\frac{1}{4} < x < -\frac{1}{8} \rightarrow -\frac{1}{2}$
 $-\frac{1}{8} < x < -\frac{1}{16} \rightarrow -\frac{3}{4}$
 $-1 < x < -\frac{1}{2} \rightarrow -\frac{1}{4}$



(الف) v