

دفعی در کس، توانش را بشمار $\xrightarrow{\text{بجای}}$ $F(n) = (n+1)^2 + (m-1)^2 + mn^2 + nn + mn$ (۱)

$\rightarrow n^2 + m + 1 + 4m^2 - 4m + 1 + mn^2 + nn + mn$
 $(10+m)n^2 + (n-4)n + 2 + mn$
 $\rightarrow 10+m=0 \rightarrow m=-10$
 $\rightarrow n-4=0 \rightarrow n=4$

$g(n) = \{ (4, -10) (4, p+1) (p+2, -1) (-9, p+k) \}$
 $\rightarrow p+1=-10 \rightarrow p=-11$
 $p=-11 \rightarrow (-9, -1), (-9, -11+k)$
 $m+n+p+k = 4 + 4 + -11 + 10 = -3$
 $-1 = -11 + k \rightarrow k=10$

الف) $y = \sqrt{\frac{n-2}{n^2-2n^2-1}}$ $n-2=0 \rightarrow n=2$
 $(n^2+2)(n^2-4) = 0 \Rightarrow n^2-4=0 \Rightarrow n=\pm 2$

$\frac{-2}{-} \mid \frac{2}{+} \mid \frac{2}{+}$
 $\Rightarrow D_y = (-2, 2) \cup (2, +\infty)$

ب) $f(n) = \frac{2n^2+1}{4-2[-n]}$ $4-2[-n] \neq 0 \rightarrow -2[-n] \neq -4$
 $\rightarrow [-n] \neq 2 \rightarrow 2 < -n < 4 \rightarrow -2 \geq n > -4$
 $D_{f(n)} = \mathbb{R} - (-3, -2]$

الف) $f(n) = \frac{\sqrt{n(n^2-1)}}{\sqrt{|n|+n}} \geq 0$ $\begin{cases} n=0 \\ n=\pm 1 \end{cases} \rightarrow$ $\frac{-1}{-} \mid \frac{0}{0} \mid \frac{+1}{+}$
 $\sqrt{|n|+n} > 0 \rightarrow n \leq 0$
 $D_{f(n)} = [0, +\infty)$

ب) $\frac{\sqrt{|n-2|-n^2}}{|n|-1} \geq 0$
 $|n|-1 \rightarrow |n| \neq 1 \rightarrow n \neq \pm 1$
 $n-2=n^2 \rightarrow n^2-n+2 = (n+1)(n-4) = 0$
 $-n+2=n^2 \rightarrow n^2+n-2 = (n-1)(n+2) = 0$
 $n=-2$
 $n=1$
 $D_f = [-2, 1) \cup (1, 4]$

$$y = \frac{1}{|n-2|-1-k}$$

وقتی دانه باشد به یکدیگر می‌رسد
یعنی نرخ هر ریشه صحیح دارد

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$$\rightarrow |n-2|-1-k=0 \rightarrow |n-2|-1=k \rightarrow |n-2|-1=k \rightarrow |n-2|=k+1$$

$$|n-2|-1=-k \rightarrow |n-2|=-k+1$$

$$|n-2|=k+1 \rightarrow n-2=k+1 \rightarrow n=k+3$$

$$|n-2|=k+1 \rightarrow n-2=-(k+1) \rightarrow n=-k-1$$

$$|n-2|=-k+1 \rightarrow n-2=-k+1 \rightarrow n=-k+3$$

$$|n-2|=-k+1 \rightarrow n-2=k-1 \rightarrow n=k+1$$

عقود $k=-2 \rightarrow k=-1$

محل قرار گیری
ریشه

$k=1$ ✓

$n=0$
 $n=2$
 $n=4$

$$y = 2n - [n] \quad \text{از } [-2, 2]$$

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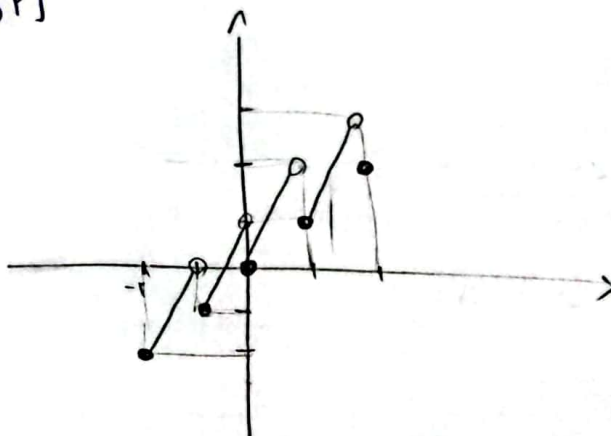
$$[-2, -1) \rightarrow [n] = -2 \rightarrow 2n+2$$

$$[-1, 0) \rightarrow [n] = -1 \rightarrow 2n+1$$

$$[0, 1) \rightarrow [n] = 0 \rightarrow 2n$$

$$[1, 2) \rightarrow [n] = 1 \rightarrow 2n-1$$

$$2 \rightarrow [n] = 2 \rightarrow 2n-2$$



مقدار $[n]$ داده
بازه شش و رسم
گسسته

$$f(n) = \frac{n^2 - 5n + 3}{n+a} + b \quad a-b=?$$

$$y=n \leftarrow \text{تابع همنی}$$

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با فرض اینکه $y=n$ و n صحیح است

$$(n-1)/(n-3) \Rightarrow a=-1 \Rightarrow b=3 \Rightarrow a-b=-4$$

$$\Rightarrow a-b/2 = -4$$

$$a=-3 \Rightarrow b=1 \Rightarrow a-b=-4$$

$$f(n) = \begin{cases} \frac{n^3 + 2n^2 - n - 2}{n-1} & n \neq \pm 1 \\ \frac{an+2}{n+b} & n = \pm 1 \end{cases}$$

$$g(n) = n+c \quad b+c=?$$

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$$(n-1)(n^2+2n+2) = \frac{(n-1)(n+1)(n+2)}{(n+1)(n-1)} = (n+2) \Rightarrow c=2$$

$$n=1 \rightarrow \frac{a+2}{1+b} = 3 \rightarrow a+2=3+3b$$

$$n=-1 \rightarrow \frac{-a+2}{-1+b} = 1 \rightarrow -a+2=-1+b$$

$$\Rightarrow f=2+fb \Rightarrow fb=2 \Rightarrow b=\frac{2}{f}$$

$b+c=2$

