

8b $df = [r, +\infty)$ $f(n) = \sqrt{(a-r)n^2 + an + b}$ (1)

دامنه عبارت تابع مطلق بوده است پس $a-r=0$ $a=r$

$f(n) = \sqrt{rn + b}$ $rn + b \geq 0$ $-b \leq rn$ $+\frac{b}{r} \geq -n$

$n \geq -\frac{b}{r}$ $-\frac{b}{r} = r$ $b = -r^2$

$|max - min| m?$ $df(n) = R$ $f(n) = \sqrt{rn^2 + rn + r - m^2}$ (2)

(I) برای آنکه دامنه R باشد $a > 0$, $\Delta \leq 0$

$\Delta \leq 0 \rightarrow f - f(r - m^2) = f - 1 + fm^2 \leq 0$ $fm^2 - f \leq 0$

$f(m^2 - 1) \leq 0$ $\frac{-1}{+1} - \frac{+1}{+1} + 1 - (-1) = +2$

اختلاف 2

8c $f(n) = \frac{\sqrt{f-n^2}}{[n] + [-n] + 1}$ $\frac{f-n^2}{[n] + [-n] + 1}$ (3)

I $f - n^2 \geq 0$ $n^2 \leq f$ $-r \leq n \leq r$ $-r \leq n \leq r$

II $[n] + [-n] = 0$ $\int_{-r}^r \frac{f-n^2}{[n] + [-n] + 1} = 0$ $\int_{-r}^r \frac{f-n^2}{[n] + [-n] + 1} = 0$

$0 = \boxed{2}$

(4) $df = [-r, +\infty)$

(الف) $y = \sqrt{rn^2 + rn^2}$ $rn^2 + rn^2 \geq 0$ $rn^2(n+1) \geq 0$

$-\frac{r}{r} + \frac{r}{r} + \frac{r}{r} = 0$ $df = [-r, +\infty)$

(ب) $\frac{\sqrt{(n^2-1)(n^2-3n^2)}}{(n^2-1)}$

$\frac{-1}{+1} - \frac{+1}{+1} - \frac{+1}{+1} - \frac{+1}{+1} = -4$

$(n-1)(n+1)n^2(n-3)$ $(-\infty, -1] \cup \frac{1}{2} \cup [3, +\infty)$

(n^2-1)

الف) $y = \sqrt{|x-2| - 3}$ $|x-2| \geq 3$ د. ایستاد

$|x-2| - 3 \geq 0$ I) $x-2 \geq 3$ $x \geq 5$

II) $2-x \geq 3$ $x \leq -1$

$[5, +\infty) \cup (-\infty, -1]$

ب) $y = \sqrt{4 - |2-x|}$ $4 - |2-x| \geq 0$ $|2-x| \leq 4$

I) $2-x \leq 4$ $x \geq -2$ $df = -2 \leq x \leq 4$

II) $x-2 \leq 4$ $x \leq 4$

الف) $y = \sqrt{1 - x|x|}$ $1 - x|x| \geq 0$ $+x|x| \leq 1$ د. ایستاد

I) $x \geq 0$ $x^2 \leq 1$ $-1 \leq x \leq 1$ $df = x \leq 1$

II) $x < 0$ $-x^2 \leq 1$ $x^2 \geq -1$ $x^2 \geq -1$ $x^2 \geq -1$ $x^2 \geq -1$

ب) $y = \frac{3 - |x-5|}{\sqrt{3 - |x-5|} - 1}$ I) $3 - |x-5| \geq 0$

$3 - x + 5 \geq 0$ $x \leq 8$

$x - 2 \geq 0$ $x \geq 2$ $2 \leq x \leq 8$

II) $\sqrt{3 - |x-5|} \neq 1$ $3 - |x-5| \neq 1$

$|x-5| \neq 2$

$x-5 \neq 2$

$x \neq 7$

$5-x \neq 2$

$x \neq 3$

$2 \leq x \leq 8$ $\{3, 7\}$

$[2, 8] - \{3, 7\}$

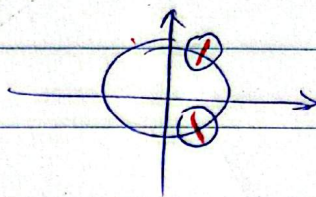
الف) $y = \sin^2 x - 1$

$df = R - \left\{ \frac{\pi}{2}, \frac{3\pi}{2} \right\}$

خرج نباید صفر شود.



ب) $y = \frac{C \cdot S^n}{r \cdot S^{n-1}}$ $r \cdot S^n \neq 1$ $C \cdot S^n \neq \frac{1}{r}$



خرج $\neq 0$

$D = R - \left\{ r \sqrt{\frac{1}{r}} \pm \frac{\pi}{r} \right\}$

الف) $y = \frac{n+r}{|r^{n+1}| - |n+r|}$

أ- لا يمكن تعويضه لانه خرج $\neq 0$

$r^{n+1} \neq n+r$
 $n \neq r$

$-r^{n-1} \neq n+r$
 $n \neq \frac{r}{r}$

$D^f = R - \left\{ r, -\frac{r}{r} \right\}$

ب) $y = \sqrt{|r^{n+1}| - |n+r|}$
 $(|r^{n+1}| \geq |n+r|)^r$

$r^{n^2+1} + r^n \geq n^2 + 4n + 9$ $r^{n^2} - r^n - 1 \geq 0$

$n^2 - r^n - r^f \geq 0$ $(n-4)(n+r) \geq 0$

$D = [r, +\infty) \cup (-\infty, -\frac{r}{r}]$

I $r^{n-1} > 0$ $n > \frac{1}{r}$

$f(n) = \sqrt{\log_a r^{n-1}}$

$\log \log r^{n-1}$

$r^{n-1} > 1$

$r^{n-1} > 1 \Rightarrow r^n > r \Rightarrow n > 1$

III) $\log_{0.1} r^{n-1} \geq 0$

$\log_a r^{n-1} \leq 1$

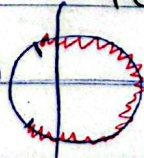
$r^{n-1} \leq 1$

$n \leq 1$

$D = [1, 1]$

$r \cdot S^{n+1} > 0$ $C \cdot S > -\frac{1}{r}$

الف) $y = \log(r \cdot S^{n+1})$



$D = \left[r \sqrt{\frac{1}{r}} - \frac{r}{r}, r \sqrt{\frac{1}{r}} + \frac{r}{r} \right]$

$D = (-\infty, -1)$

ب) $\log \frac{n-1}{n+1}$ $\frac{n-1}{n+1} > 0 + \frac{-1}{1+1}$



$\log_{10} \frac{n-1}{n+1} \geq 0$

$\frac{n-1}{n+1} \geq 1$

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

$\frac{-r}{1+1} \geq 0$ $n < -1$