

۲.

رأب

۱۷ اردیبهشت ۱۳۹۷

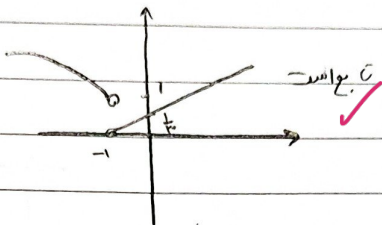
رأب

$$n = \begin{cases} y-1 \\ -y^r \end{cases}$$

$$y > 0 \rightarrow y^r > 0 \rightarrow y^r - 1 > -1 \Rightarrow n > -1$$

$$y < 0 \rightarrow y^r > 1 \rightarrow -y^r < -1 \Rightarrow n < -1$$

$$y = \begin{cases} \frac{n+1}{r} & n > -1 \\ \sqrt{-n} & n < -1 \end{cases}$$



$$g(n) = \sqrt{\frac{n f(n-r)}{f(n)}}$$

$$f(n-r) = f(n) \text{ and } f(n-r) = f(n) \text{ and } f(n-r) = f(n) \text{ and } f(n-r) = f(n)$$

	-r	-r	0	r	n	r
$f(n-r)$	-	-	0	+	+	+
$f(n)$	-	0	+	+	+	+
n	-	-	-	0	+	+
ϕ	-	+	0	-	+	+

$$D = (-\infty, -r] \cup [0, r) \cup [r, +\infty)$$

فقط حواصی باشد که $n = 4$ در دایره است و $n = 4$ در دایره است
نیست که در دایره است و $n = 4$ در دایره است

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

$$f(n) = \frac{r n^r - r n + r}{n^r - r n} \Rightarrow n^r - r n \neq 0 \Rightarrow n(n-r)(n+r) \neq 0$$

$$D_f = \mathbb{R} - \{-r, 0, r\}$$

$$\Delta = 9 - 4(r)(r) = -7$$

$$D = (-\infty, -r) \cup (r, +\infty)$$

$$y = \sqrt{\frac{n-r}{n^r - r n - 1}}$$

$$y = \frac{r n^r + 1}{r - 2[-n]}$$

$$n^r = t \rightarrow t^r - 2t - 1 = 0 \Rightarrow n^r = t \rightarrow n = \pm t$$

$$r \neq 2[-n] \rightarrow [-n] \neq r$$

$$D_f = \mathbb{R} - (-r, r)$$

$$f(n) = \sqrt{\frac{n(n^r-1)}{|n|+n}}$$

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

$$n(n^r-1) > 0 \Rightarrow n > 0 \text{ and } n^r > 1$$

$$|n| \neq 1 \Rightarrow n \neq \pm 1$$

$$|n-r|-n^r > 0$$

$$D_f = [-r, 1) - \{-1\}$$

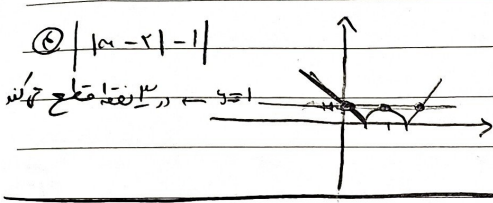
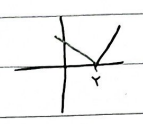
1) $y = \sqrt{(a-r)[a-r]}$
 $n=r$ ✓ $G[a]=r$ $r < a < r$
 $\frac{r}{+} \frac{r}{+} \frac{r}{+}$ $D_f = IR$ ✓

2) $y = \sqrt{|a-1| [a-r]}$
 $a=1$ ✓ $L[a]=r \rightarrow r \leq a < r$
 $\frac{1}{-} \frac{r}{-} \frac{r}{+}$ $D_f = [r, +\infty) \cup \{1\}$ ✓

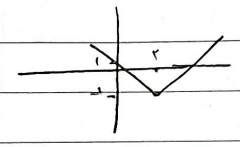
3) $y = \frac{1}{|a-r-1| - k}$

4) $y = |a|$

5) $y = |a-r|$



7) $y = |a-r|-1$
 $k=1$ ✓



8) $f(a) = \frac{a^r + r a + r}{a^r + r a + r} \rightarrow a \neq -1, a \neq r$
 $a \neq -1 \rightarrow \frac{a+1}{a-1}$
 $a \neq 1$ ✓

9) $D_f = IR - \{-r-1, 1\}$
 $\Rightarrow n=r$

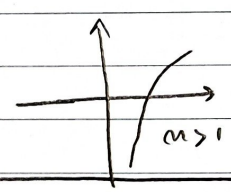
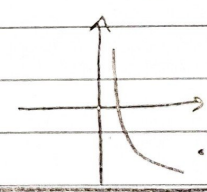
10) $a^r - r n a + r n = 0 \rightarrow a^r - r n a + r n = 0$
 $a^r - r n a + r n = 0 \rightarrow (a-r)^r = 0$
 $a = r$ ✓

11) $y = \log \log_{a+1} \frac{1}{a}$

12) $a+1 \neq 1 \rightarrow a \neq 0$
 $a+1 > 0 \rightarrow a > -1$
 $a > 0$

13) $\log \frac{1}{a} > 0 \rightarrow 0 < a < 1$

14) $D_f = (0, 1)$ ✓



15) $D_{f(a)} = [-a, r]$

16) $D_{f(r a^r - 1)} = ?$

17) $-a \leq r a^r - 1 \leq r$
 $-a \leq r a^r - 1 \leq r$
 $-a \leq r a^r - 1 \leq r$

18) $D_{f(r a^r - 1)} = \left[-\frac{r \sqrt{r}}{r}, +\frac{r \sqrt{r}}{r} \right]$

19) $a^r \leq \frac{r}{\sqrt{r}} \rightarrow \frac{-r}{\sqrt{r}} \leq a \leq \frac{r}{\sqrt{r}}$

20) $-\frac{r \sqrt{r}}{r} \leq a \leq \frac{r \sqrt{r}}{r}$ ✓