

پاسخنامه تشریحی تکلیف شماره ... کلاس ...

الف) ① $n \neq 0$ ② $\frac{x^{n+1} - x^{n-1}}{n(n-1)} \geq 0$ $\rightarrow D_f = (-\infty, 0) \cup [\frac{1}{n}, \infty)$	1
ب) ① $n \neq -1, 0, 1, 2$ ② $\frac{3n+9+n-1}{(n-1)(n+2)} \neq 0 \rightarrow n+4 \neq 0$ $\rightarrow D_f = \mathbb{R} - \{-4, -1, 0, 1, 2\}$	2
الف) $(\frac{1}{x})^n = 0 \rightarrow n = -2$ $\{ \frac{3x-6}{x^2} = 0 \rightarrow n = 2, \Delta$ $\rightarrow D_f = \mathbb{R} - (-2, 2, \Delta)$ ب) ① $n \geq 1$ ② $y \geq -1$ $\rightarrow D_f = [1, 12]$	3
① $n \neq 0 \rightarrow \mathbb{R} \checkmark$ (همواره مثبت) ② $\sqrt{n^2-1} \rightarrow n \neq [-1, 1]$ ③ $n^2 - n - 2 \geq 0 \rightarrow (n-2)(n+1) > 0 \rightarrow n \neq [-1, 2]$ $\rightarrow D_f = \mathbb{R} - [-1, 2]$	4
$\frac{a+b}{\frac{1}{x} + \frac{y}{y}} = \frac{y}{x} = 1$ $3x + 2a - 5 = 0 \rightarrow a = \frac{-3x+5}{2}$ $a = \frac{-1}{x} \rightarrow -x^2 - \frac{1}{x} + 3 = 0$ $S = \frac{1}{x} = \frac{1}{x} - 2 + 0$ $b = \frac{3}{x}$	5
$f_{km} - n = 0 \rightarrow f_{km} = n$ $3n - 2 \leq n \rightarrow 2n \leq 2 \rightarrow n \leq 1$ $2n + 3 = n \rightarrow n = -3 \checkmark$ $D_f = [-3, +\infty)$	6

$$\sin \frac{\pi}{r} + \cos \frac{\pi}{r} = \frac{r+\sqrt{r}}{r} \rightarrow r \left(\frac{r+\sqrt{r}}{r} \right)^r$$

$$= x \left(\frac{r+\sqrt{r}}{r} \right)^r - x \left(\frac{r+\sqrt{r}}{r} \right)^r$$

$$= \frac{r+\sqrt{r} - 1 - \sqrt{r}}{r} = \frac{-1-\sqrt{r}}{r}$$

$$\boxed{\frac{-1-\sqrt{r}}{r}}$$

$$f(a) = \frac{a+1}{a-1} \rightarrow f(f(a)) = \frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} = \frac{a+1+a-1}{a+1-a+1} = \frac{2a}{2} = a$$

$$a \neq 1$$

$$\rightarrow a \in \mathbb{R} - \{1\}$$

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

$$f(\beta) = -r \rightarrow f(\beta) = \beta^r - r\beta = -r$$

$$\hookrightarrow (\beta-r)^r = 0 \rightarrow \beta = r = g(a)$$

$$g(a) = r \rightarrow r = \sqrt{a^r - 1}$$

$$a = \pm \sqrt{a^r - 1}$$

$$f(n+r) = \frac{(n-r)(n-r)}{n+r-9} \rightarrow f(n) = (n-9)(n-9)$$

$$\rightarrow f(n) \times f(-n) = (-r)(-1)(-9)(-1) = 144$$

$$f(m) = \tan^r m \rightarrow r, d = fC^r + dC \xrightarrow{x^r} 1C^r + 10C - v = 0$$

$$C^r + 10C - d = 0$$

$$(C+14)(C-4) = 0$$

$$\hookrightarrow -14, 4 \text{ and } \frac{1}{4}, \frac{1}{14}$$

$$\cos m = \frac{1}{r}$$

$$\tan^r m = \frac{1}{\cos^r m} - 1$$

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

سازگار
از معصوم عزیز