

لایس : یازده رشتن A

شماره ۱ زلف : د

نام و نام خانوادگی : مسلماندار خواجه

$$\frac{d}{dt}(x+1) = \left(\frac{1}{y}\right)^{x-1} - 1$$

اذا $f(x) = \left(\frac{1}{x}\right)^{x-1}$ بالنسبة لمتغير $f(x)$ $y = \sqrt{x^{x+1}}$ ، اوجد y .

$$y = \sqrt{2^{2k} x \left(\frac{1}{4}\right)^{2k-1} - 1} \quad \frac{0 \quad 1}{- \quad 0 \quad + \quad 0 \quad -}$$

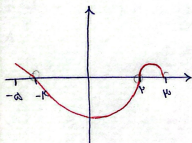
$$D_f = [0, 1]$$

$f(-x) = \sqrt{-x + |-x + p|}$

$$(I) \rightarrow \chi \ll r \rightarrow \sqrt{-2\chi + p} \gg 0 \rightarrow +\chi \gg, -p \rightarrow \chi \gg, |$$

(II) $x > 2 \rightarrow \sqrt{-x} \Rightarrow$ تعريف
نقشه $D_f = [-\infty, 1]$

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اگر نمودار f مثلث قائم باشد داریم $y = \sqrt{\frac{x-1}{f(x)}}$ ، با بسط اول

5 1 2 3

(9) $\rightarrow (-f), (y), (u)$

$$Df = (-f, +1) \cdot U(r, \mu)$$

$x=1 \rightarrow f(1+1) \Rightarrow V$
 $x=1 \rightarrow f(1+1) \Rightarrow 1$

دېستگي $f(v) + f(1_0)$ چوځه ښايي $f(2x+x) = 10x - 1$ دي

$V+1 = 1$

(I) $2x + x = 10$
 $\downarrow$
 $x=1$

(II) $2x + x = 1$

$\downarrow$
 $x=1$

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u

1

دېستگي 1, $\frac{g(\sqrt{1+2}) - 1}{f(\sqrt{1+2})}$ چوځه ښايي $g(x) = 2x^3 + 9x^2 + 14x$, $f(x) = 2x^3 - 9x^2 + 14x$ دي
 $\uparrow$ t

$g(t-1) = (t-1)^3 + 9(t-1)^2 + 14(t-1) = (t-1)((t-1)^2 + 9(t-1) + 14) =$
 $(t-1)(t^2 - 9t + 9 + 9t - 14 + 14) = (t-1)(t^2 + 4t + 9) = t^3 - 14$
 $f(t-1) = (t-1)^3 - 9(t-1)^2 + 14(t-1) \Rightarrow (t+1)(t^2 + 4t + 9 - 4t - 14 + 14) =$
 $(t+1)(t^2 - 2t + 9) = t^3 + 14 = 14 + 14 = 28$

$\frac{t^3 - 14}{t^3 + 14} = \frac{14 - 14}{14 + 14} = \frac{-14}{28} = -\frac{1}{2}$

دېستگي 2, $g(x) = \sqrt{2x-1}\sqrt{2x-1}$, $f(x) = \sqrt{2x+1}\sqrt{2x-1}$ دي

$(g(x) + f(x))^2 \Rightarrow$
 $a \quad b \quad a$
 $(2x-1)\sqrt{2x-1} + (2x-1)\sqrt{2x-1} + 2\sqrt{(2x-1)(2x-1)} \Rightarrow 2x-1\sqrt{2x-1} + 2x-1\sqrt{2x-1} + 2x-14$
 $\Rightarrow 4x-14 \xrightarrow{2x-14} 2\sqrt{2x-1} = a+b\sqrt{2x+c}$
 $\begin{cases} a=0 \\ b=1 \\ c=-1 \end{cases}$
 $\frac{0+1}{-1} = -\frac{1}{1}$

• $\frac{g}{f}$ با بسط اولی: $g(x) = \{(2, 1), (1, 0), (3, 2), (0, 4)\}$, $f(x) = \frac{x+2}{x^2-5x+6}$ می

$$\left\{ \left(2, \frac{1}{-4} \right), \left(0, \frac{4}{6} \right) \right\} \Rightarrow \left\{ \left(2, -\frac{1}{4} \right), \left(0, \frac{2}{3} \right) \right\}$$

$$f(2) \Rightarrow \frac{4}{-4} = (-1)$$

$$f(0) \Rightarrow \frac{2}{6} \Rightarrow \left(\frac{1}{3} \right)$$

$$(x-1)(x-3)$$

$$\downarrow$$

$$R = \{1, 3\}$$

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• $g(x) = \{(-2, 3), (1, -1), (3, 2), (-1, 0)\}$, $f(x) = \{(1, 2), (3, -1), (4, 2), (-1, 4)\}$ می

? دو مقدار

الف) $f(g(x)) \Rightarrow \left\{ \left(\frac{1}{2}, 2 \right), \left(\frac{3}{2}, -1 \right), (2, 2), \left(-\frac{1}{2}, 4 \right) \right\}$

ب) $f(g^2(x)) \Rightarrow \{(1, 2), (9, -1), (14, 2), (1, 4)\}$

ج) $g^2(x) + 1 \Rightarrow \{(-2, 14), (1, 3), (3, 4), (-1, 1)\}$

د) $\frac{f}{g} \Rightarrow \{(1, -4), (3, -1), \cancel{(-1, \frac{14}{0})}\}$ تعریف نشده

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