

۱) که اگر در آن متن پذیر نیست (در این) $x=0 \rightarrow$ نتوانیم متن را متن قرار دهیم $a+1=b$ $\rightarrow$ میرسد

$$f'(x) = \begin{cases} x < 1 \rightarrow \frac{r_n}{r\sqrt{x}} = 1 \\ x > 1 \rightarrow \frac{r_n}{r\sqrt{x}} = \frac{r_0}{r} \end{cases} \quad \left\{ \begin{array}{l} \text{در این متن پذیر است} \\ \frac{r_0}{r} = 1 \rightarrow b = \frac{r}{r} \rightarrow a = \frac{1}{r} \rightarrow a+b = 2 \end{array} \right.$$

۲) $f'(1) = \frac{(-r)(\sqrt{x}) + (x-1)(\frac{r_n}{r\sqrt{x}})}{r\sqrt{x}} = -r + \frac{-1}{r} = -\frac{1}{r}$

$g'(1) = \frac{(-1 + \frac{r}{r\sqrt{x}})(\sqrt{x}) - (1n-r+1)(\frac{r_n}{r\sqrt{x}})}{r\sqrt{x}} = -\frac{5}{r} - \frac{\sqrt{r}}{r}$

$f'(1) - r g'(1) = \frac{\sqrt{r}}{r}$

۳) $ba+c = \frac{1}{a} \rightarrow ba^2 + ca - 1 = 0$ ①

$f'(a) = f'(a) \Rightarrow b = -\frac{1}{a^2}$ ② $\xrightarrow{①, ②} a^2(-\frac{1}{a^2}) + (a-1) = 0 \rightarrow c = \frac{r}{a} \rightarrow ac = 2$

۴) $\lim_{n \rightarrow a^-} f(n) = \lim_{n \rightarrow a^+} f(n) = b \rightarrow$ می‌توانیم m را a بکنیم

$f'_-(a) = 0$ $f'_+(a) = m(x-a)^{m-1} \xrightarrow{m=0} f'_+(a) = 0 \rightarrow$ می‌توانیم m را 0 بکنیم

$\xrightarrow{m=1} f'_+(a) = 1 \checkmark$ $\rightarrow$ می‌توانیم m را 1 بکنیم

$\xrightarrow{m>1} f'_+(a) = 0 \rightarrow$ می‌توانیم m را >1 بکنیم

۵) $g'(-\sqrt{r}) \cdot f'(g(-\sqrt{r})) = (f \circ g)'(\sqrt{r})$ $f \circ g(n) = \frac{1}{\sqrt{r(\frac{1}{r_n})}} = \frac{1}{\frac{1}{n}} = n \rightarrow f \circ g'(-\sqrt{r}) = 1$

۶) $f(r) = -ra - \delta$ $f'(r) = -a$

$f'(r) - f(r) = r \rightarrow -a + ra + \delta = r \rightarrow a = -\frac{r}{r} \Rightarrow \frac{f(r)}{f'(r)} = \frac{-ra - \delta}{-a} = \frac{-1}{r}$

۷) $g(\frac{r}{\sqrt{n}}) = 2 \rightarrow f(r) = (0n)^r + 1 \rightarrow f'(r) = 0 \cdot x = 1 \dots$ $g'(n) = \frac{r_n}{r\sqrt{x-1}}$

$f \circ g'(\frac{r}{\sqrt{n}}) = g'(n) \cdot f'(g(n)) = -\frac{r}{\sqrt{n}} \times 1 = -\frac{r}{\sqrt{n}} \rightarrow -\frac{r}{\sqrt{n}} = \frac{r_0}{r}$

۸) $f'(-1) = \frac{r}{r} \xrightarrow{x=-r} g(-r) = f(-1) + f(1) \xrightarrow{\frac{-r-0}{0}} f'(1) = f'(1-0) = f'(-1)$

$g'(-r) = f'(-1) + r f'(-1) = \frac{15}{r} = 9$

۹) $\lim_{h \rightarrow 0} \frac{f(0-h) - r f(0-h) + r}{h(0-h)} = (\lim_{h \rightarrow 0} \frac{f(0-h) - 1}{1(0-h)}) (\lim_{h \rightarrow 0} \frac{f(0-h) - r}{-h}) = \frac{1}{0} \times -f'(0) = -\frac{1}{0} \times \frac{r_0}{r} = \frac{-\delta}{1r}$

$f'(0) = (x-1) \frac{1}{r\sqrt{(x+r)^r}} + \sqrt{x+r} = \frac{r_0}{1r}$

۱۰) $d_1 \Rightarrow 4y - rx = 1 \rightarrow y = \frac{1}{4}x + \frac{1}{4} \rightarrow m_1 = \frac{1}{4} \rightarrow m_{\text{مماسه}} = -4$ ①

$y = x^r - 2x + \delta \rightarrow y' = rx - 2 \xrightarrow{①} rx - 2 = -4 \rightarrow x = 1 \rightarrow A \left| \frac{1}{r} \right.$