

11, K₂

حصہ نای - ۱۲ دختر A

$$f(a) = \begin{cases} a + \sqrt{a^2} & a < 1 \\ b \sqrt[3]{a^2} & a \geq 1 \end{cases}$$

صَبَقِ سَوَال بَایَد، بِحَقِّهِ مَسْتَقِ نَافِذِ رُسُودِ اَزْ اَجْبَایِ که مُنَاجِلَه دَمِ بَرِک تَرَازِ اِدَارِ هِس صَفْرَتِفِ کَوَانْد زُرْ رَادِ کَا
رَاصْفِرَنْد اِطَاعِ مُنَاجِلَه اول ۱۲ آه اَحْمَان ۱۵ است که صَفْرِ رِبَّه ان است و بِبِ مَسْتَقِ نَافِذِ رُسُودِ

$\frac{f(r)}{r} = \frac{r}{r^2} = \frac{1}{r}$

$$f'(1) - r g'(1) = (f - r g)'(1) \rightarrow \left(\frac{-2a + \varepsilon}{\sqrt[3]{ar}} - \frac{-2a + \varepsilon + 2\sqrt{3}a}{\sqrt[3]{ar}} \right) \quad (2)$$

$$\rightarrow \frac{-2\sqrt{3}a}{\sqrt[3]{ar}} \xrightarrow{\text{مشتق}} -2\sqrt{3} \frac{a^{\frac{1}{2}}}{a^{\frac{1}{3}}} \Rightarrow (-2\sqrt{3} a^{-\frac{1}{6}})' \rightarrow \frac{2\sqrt{3}}{6} a^{-\frac{7}{6}} \xrightarrow{a=1} \frac{1}{3} \quad \checkmark$$

$$\begin{aligned} \text{میشود} \rightarrow a=a \rightarrow ab+c &= \frac{1}{a} & a^2b+ac &= 1 \\ \text{مشتق میشود} \rightarrow a=a \rightarrow b &= -\frac{1}{a^2} & a^2b &= -1 \end{aligned} \rightarrow -1+ac=1 \quad \boxed{ac=2} \quad (3)$$

$$m < 0 \quad f(a) = \begin{cases} b & a < a \\ b + \frac{1}{(a-a)^m} & a > a \end{cases} \rightarrow \text{دامنه نمی باشد} \quad \times$$

(4) $m > 0$ ، مقادیر مستطانی کین

$$m = 0 \quad f(a) = \begin{cases} b & a < a \\ b+1 & a > a \end{cases} \quad \times$$

$$m = 1 \quad \checkmark \quad f(a) = \begin{cases} b & a < a \\ b+a-a & a > a \end{cases} \rightarrow f'(a) = \begin{cases} 0 & a < a \\ 1 & a > a \end{cases} \quad \checkmark \quad \begin{matrix} \text{مشتق ها} \\ \text{تساوی برات} \end{matrix}$$

دارای یک مقدار $\checkmark$

$$f'(x) = -a$$

$$f(x) \xrightarrow[\text{در } x=1]{\text{در } x=1} -3a - 5$$

$$f'(x) - f(x) = 2$$

$$-a + 3a + 5 = 2 \quad 2a = -3 \quad a = -\frac{3}{2}$$

$$\frac{f(x)}{f'(x)} = \frac{-3a - 5}{-a} = \frac{\frac{9}{2} - 5}{\frac{3}{2}} = \frac{-\frac{1}{2}}{\frac{3}{2}} = \left(-\frac{1}{3}\right)$$

$$(f \circ g\left(\frac{x}{\sqrt{x}}\right))' \rightarrow g'\left(\frac{x}{\sqrt{x}}\right) \times f'\left(g\left(\frac{x}{\sqrt{x}}\right)\right)$$

(جواب کامل پایین صفحه)

$$g'(a) = \frac{-2a}{3\sqrt{(a^2-1)^2}} \xrightarrow{a=\frac{x}{\sqrt{x}}} \frac{-4 \times 1}{3\sqrt{1} \times 1} \quad \left\{ \begin{array}{l} f(a) = (a[a^2 + \frac{1}{r}])^{r+1} \\ \text{ساده} \rightarrow (a[a^2] + \frac{a}{r})^{r+1} \end{array} \right.$$

$$f(a) = (a + \frac{a}{r})^{r+1} \rightarrow f'(a) = r(a + \frac{a}{r})(1 + \frac{1}{r})$$

$$g\left(\frac{x}{\sqrt{x}}\right) = 2 \rightarrow f'\left(g\left(\frac{x}{\sqrt{x}}\right)\right) = f'(2) = r(2+1)(1+\frac{1}{r}) = 2 \times 3 \times \frac{3}{2} = 9$$

$$g'\left(\frac{x}{\sqrt{x}}\right) \times f'\left(g\left(\frac{x}{\sqrt{x}}\right)\right) = \frac{-4}{\sqrt{x}} \times 9 \rightarrow \frac{-36}{\sqrt{x}} \times \frac{\sqrt{x}}{\sqrt{x}} = -36 \times \frac{1}{\sqrt{x}} \rightarrow \frac{-36}{\sqrt{x}}$$

$$g'(-2) = f'(-1) + f'\left(\frac{1}{2}\right) \rightarrow f'(-1) = f'(\varepsilon - a)$$

$$g'(-2) = f'(-1) \rightarrow f'(-1) = f'(\varepsilon - a)$$

$$f' \times \frac{x}{r} = 9$$

$$g(a) = \frac{1}{r a^r} \quad , \quad f(a) = \frac{1}{\sqrt[r]{r a}} \quad (f \circ g)' = \left(f\left(\frac{1}{r a^r}\right)\right)'$$

$$\rightarrow \left(\frac{1}{\sqrt[r]{r a^r}}\right)' = \left(\frac{1}{a}\right)' = (a)' = 1$$

$$\frac{(f(a-n)-1)(f(a-n)-2)}{n(a-n)} \xrightarrow{f(a)=2} \frac{f(a-n)-1}{a-n} \times \frac{f(a-n)-2}{n} \rightarrow f(a)$$

$$f'(a) = \frac{1}{\sqrt[r]{a+r}} + (a-\varepsilon) \times \frac{1}{\sqrt[r]{(a+r)^r}} = 2 + \frac{1}{12} = \frac{25}{12}$$

$$\frac{f(a)-1}{a} \times f'(a) = \frac{1}{a} \times \frac{25}{12} = \frac{25}{12a}$$

$$f'(a) = 2a - \varepsilon \quad ay = 2a + 1 \quad y = \frac{1}{r}a + 1 \quad m = \frac{1}{r}$$

$$y = 2x - 2 \rightarrow 2a - \varepsilon = -2 \quad a = 1$$

نیست 1-2

$$y = f(g(u)) \rightarrow y' = g'(u) f'(g(u)) \xrightarrow{u = \frac{r}{\sqrt{\lambda}}} y' = g'\left(\frac{r}{\sqrt{\lambda}}\right) f'\left(\underbrace{g\left(\frac{r}{\sqrt{\lambda}}\right)}_r\right) \rightarrow y' = g'\left(\frac{r}{\sqrt{\lambda}}\right) f'(r) \quad \text{سوال ٧}$$

$$g(u) = \frac{1}{\sqrt[3]{2u-1}} = (2u-1)^{-\frac{1}{3}} \rightarrow g'(u) = -\frac{1}{3} (2u-1)^{-\frac{4}{3}} \times 2 = -\frac{2}{3} (2u-1)^{-\frac{4}{3}}$$

$$g'\left(\frac{r}{\sqrt{\lambda}}\right) = -\frac{2}{3} \times \frac{r}{\sqrt{\lambda}} \left(\frac{1}{\lambda}\right)^{-\frac{4}{3}} = -\frac{2}{3} \times r \times \frac{1}{r^{\frac{4}{3}}} = -\frac{2 \times \sqrt{r}}{r^{\frac{1}{3}}} = -\sqrt{r} \rightarrow \underline{g'\left(\frac{r}{\sqrt{\lambda}}\right) = -\sqrt{r}}$$

$$f(u) = 19u^2 + 1 \rightarrow f'(u) = 38u \rightarrow \underline{f'(r) = 38}$$

$$y' = g'\left(\frac{r}{\sqrt{\lambda}}\right) f'(r) = -\sqrt{r} \times 38 = r \times (-19\sqrt{r}) \rightarrow \underline{\underline{-19r\sqrt{r}}}$$