

تکلیف شماره ۲۳

پارسه نیاراد . دوازدهم دختر B

$$g'(\frac{\pi}{\varepsilon}) = (-\sqrt{r} \sin \frac{\pi}{\varepsilon} + r(1 + \tan^2 \frac{\pi}{\varepsilon}) \times f'(\frac{r}{\varepsilon}) \quad (1)$$

$$\Rightarrow f'(\frac{r}{\varepsilon}) \times r = \sqrt{r} \quad f'(\frac{r}{\varepsilon}) = \frac{\sqrt{r}}{r}$$

$$f(x) = \frac{(r + \cos x)(\cos^2 x + \varepsilon - r \cos x)}{(r - \cos x)(r + \cos x)} \quad (2)$$

$$f'(\frac{\sqrt{r}}{4}) = \frac{(r(\frac{1}{r}) - r)(r - \frac{\sqrt{r}}{r}) - (-\frac{1}{r})(\frac{1}{\varepsilon} - \sqrt{r})}{(\frac{\varepsilon + \sqrt{r}}{r})^2} = \frac{r}{r\sqrt{r} + 14\sqrt{r}}$$

$$g'(\frac{\sqrt{r}}{4}) = \frac{+\frac{1}{r}}{\frac{1}{\varepsilon} - 14\sqrt{r}} = \frac{\varepsilon}{r\sqrt{r} - 14\sqrt{r}} \quad \text{درباره} = \frac{-\delta}{r\sqrt{r} + 14\sqrt{r}}$$

$$x > \frac{r}{\varepsilon} \rightarrow f' = \lim_{x \rightarrow \frac{r}{\varepsilon}^+} \frac{(\varepsilon x - r) \times \sqrt{ax} - 0}{(x - \frac{r}{\varepsilon})} = \varepsilon \sqrt{ax} \quad (3)$$

$$x < \frac{r}{\varepsilon} \rightarrow f' = \lim_{x \rightarrow \frac{r}{\varepsilon}^-} \frac{-(\varepsilon x - r) \sqrt{ax} - 0}{(x - \frac{r}{\varepsilon})} = -\varepsilon \sqrt{ax}$$

$$\varepsilon \sqrt{ax} - (-\varepsilon \sqrt{ax}) = 14 \sqrt{ax}$$

$$r\sqrt{a} = 14 \sqrt{\frac{r}{\varepsilon} a} = r\sqrt{14a} \quad 14a = 4 \quad a = 0.18$$

$$y = -ax + r \quad (4)$$

$$f(\varepsilon) = -\varepsilon a + r \quad f'(\varepsilon) = -a$$

$$f(\varepsilon) + f'(\varepsilon) = -\delta a + r = -1 \quad a = \frac{r}{\delta}$$

$$\Rightarrow f'(\varepsilon) = -a = -\frac{r}{\delta}$$

$$y = \frac{n+d}{v} = \frac{an-1}{rn+1} \Rightarrow rn^r + 14n + d = Van - v \quad (D)$$

$$I \quad rn^r + (14 - Va)n + 1r = 0$$

$$y' = \frac{1}{v} = \frac{a+r}{(rn+1)^r} \rightarrow 9n^r + 4n + 1 = Va + r$$

$$Va = 9n^r + 4n - r \quad II$$

$$I, II \rightarrow rn^r + (14 - 9n^r - 4n + r)n + 1r = 0$$

$$9n^r + rn^r - rn^r - 1r = 0$$

$$rn^r(1+rn) - 1r(1+rn) \rightarrow (1+rn)(rn^r - 1r) = 0$$

$$n = \frac{-1}{r}, +r, -r \quad \text{indicated } n = r$$

$$II \rightarrow Va = 9(\epsilon) + 1r - r = r\Lambda \quad a = \epsilon$$

$$f(r) = \Lambda + ra - b = 0 \quad ra - b = -\Lambda \quad (4)$$

$$f'(r) = rn^r + a = 0 \rightarrow 1r + a = 0$$

$$a = -1r \quad b = -14 \quad b - a = -\epsilon$$

$$\sin^n(n^r) \times \frac{1}{n} \times \sin^n(n^r) \times (1 + \cos n)^m \quad (V)$$

$$= \frac{r^m \times \sin^{rn-rm}(0)}{n} = r \frac{11}{r}$$

$$rn - rm = 0 \rightarrow m = n \quad m = \frac{11}{r}$$

$$rm + n = r\left(\frac{11}{r}\right) + \frac{11}{r} = 14/d$$

$$\frac{\sqrt{x}+1}{\sqrt{x}-1} \times \frac{\sqrt{x}+1}{\sqrt{x}+1} = \frac{x+2\sqrt{x}+1}{x-1} \quad (\wedge)$$

$$f'(x) = \frac{\left(1 + \frac{1}{\sqrt{x}}\right)(x-1) - (1)(x+2\sqrt{x}+1)}{(x-1)^2}$$

$$f'(2) = \left(1 + \frac{1}{\sqrt{2}}\right) - (2+2\sqrt{2}) = -2 + \left(\frac{-2\sqrt{2}}{2}\right)$$

$$\left(f^{-1}(2)\right)' = \frac{1}{\frac{-2\sqrt{2}-2}{2}} = \frac{-2}{2\sqrt{2}+2}$$

أحد متروك: $f(0) - f(-1) = \frac{1 - (\wedge - \wedge a) = \wedge a - \vee}{\wedge a - \vee} \quad (9)$

$$\wedge a - \vee = -1 \rightarrow a = -0.5 \quad x = -2a = 1$$

$$f'(1) = (2x) \times 2 \times (x^2+1)^2 (0.5) + (-0.5)(\wedge) = 2 \times 2 - 2 = 2$$

أحد متروك: $\sin\left(\frac{\pi}{x}\right) \cos \pi - \sin\left(\frac{\pi}{x}\right) \cos\left(\frac{\pi}{x}\right) \quad (10)$

$$= \frac{-1}{\frac{\pi}{x}}$$

أحد متروك: $\sin^2\left(\frac{\pi}{x}\right) - \cos^2\left(\frac{\pi}{x}\right) - \sin^2\left(\frac{\pi}{x}\right) + \cos^2\left(\frac{\pi}{x}\right)$

$$= \frac{1}{\frac{\pi}{x}}$$

$$\Rightarrow \frac{\frac{-1}{\frac{\pi}{x}}}{\frac{1}{\frac{\pi}{x}}} = (-1)$$