

آینه آینه

$$f(x) \rightarrow Df(x) = \begin{bmatrix} 1 & 2 \end{bmatrix}$$

(۱)

$$g = f\left(\frac{3x+2}{5}\right)$$

$$\frac{3x+2}{5} = -2 \rightarrow 3x+2 = -10$$

$$3x = -12 \rightarrow x = -4$$

$$Dg = \begin{bmatrix} -4 & 5 \end{bmatrix}$$

$$\frac{3x+2}{5} = 4 \rightarrow 3x+2 = 20 \rightarrow x = 6$$

$$f(3x-2) \quad Df = \begin{bmatrix} -2 & 3 \end{bmatrix} \quad f'(x) = ? \quad (2)$$

$$3x-2 \xrightarrow{x=-2, 3} \begin{cases} -4-2 = -6 \\ 9-2 = 7 \end{cases}$$

$$\Rightarrow Df(x) = \begin{bmatrix} -6 & 7 \end{bmatrix}$$

$$f\left(\frac{3x+1}{2}\right) \quad D = \begin{bmatrix} -1 & 3 \end{bmatrix} \quad (3)$$

$$\frac{3x+1}{2} \xrightarrow{\begin{matrix} x=-1 \\ x=2 \end{matrix}} \begin{cases} -1 \\ 5 \end{cases} \rightarrow Df(x) = \begin{bmatrix} -1 & 5 \end{bmatrix}$$

$$Df(2-5x)$$

$$-1, 2-5x, 2$$

$$\Rightarrow -2, 2-5x, 2 \rightarrow -\frac{2}{5}, -x, \frac{2}{5}$$

$$\rightarrow Df = \begin{bmatrix} -\frac{2}{5} & 0 & \frac{2}{5} \end{bmatrix}$$

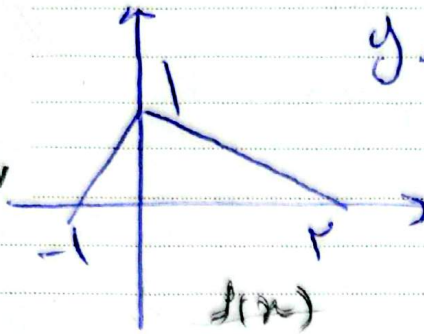
$$-\frac{2}{5}, 2-5x, \frac{2}{5}$$

هوای کوی تراز سرخسود آری غریب رادل سرکشته با وطن باشد

۳۳

پنج شنبه
۲۳ شعبان

12 February
Week 48

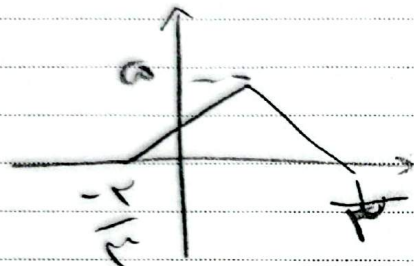


$$y = 2f(x+m) + 3 \quad (2)$$

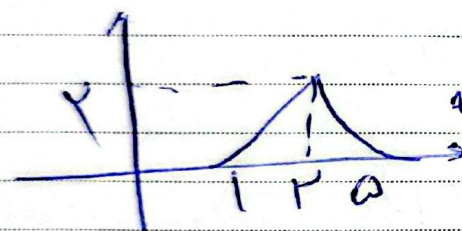
$$-1 \leq x+m \leq 2$$

$$-2 \leq x \leq 1$$

$$-\frac{2}{3} \leq x \leq \frac{1}{3}$$



$$y = 2f(x+m) + 3$$



$$f(x) + f(x-m) \quad (3)$$

$$-1 \leq x-m \leq 2$$

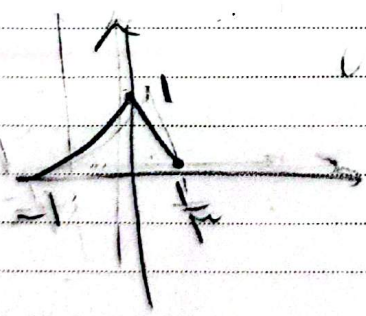
$$-1 \leq x-m \leq 2$$

$$-1 \leq x-m \leq \frac{1}{3}$$

۳۴

جمعه
۲۴ شعبان

13 February
Week 48



$$y = 2f(x+m) + 3$$

$$y = 2f(x+m) + 3$$

$$y = -\frac{1}{3}x^2 + \frac{4}{3}x + 1 \quad (4)$$

$$y = -\frac{1}{3}(x-2)^2 + 3$$

بدست آوردن تابع

$$-\frac{1}{3}(x-2)^2 + 3 = x^2$$

$$x^2 - 4x + 4 = 0$$

$$x^2 - 4x + 4 = 0$$

$$\begin{cases} x = 2 \\ x = 2 \end{cases}$$

خوش بود که محاکمه تجربه آید به میان تابه روی شود هر که در او غش باشد

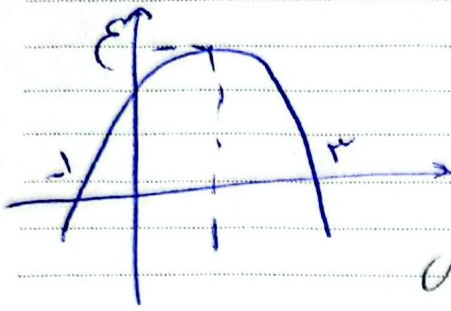
دوره

شنبه

۲۵ شعبان

14 February

Week 49



$$A(\alpha, \beta)$$

$$y = 1 - 2x(x+1)$$

$$\begin{aligned} 1 &= 2x(x+1) \rightarrow 2x^2 + 2x - 1 = 0 \\ \alpha &= x = \frac{-1 \pm \sqrt{1+2}}{2} \end{aligned}$$

$$\beta = -2\alpha^2 + 1 = -1 + 1 = 0$$

$$\alpha\beta = \frac{1}{2}$$

$$Df = (\alpha, \beta) \quad Dg = (-1, b)$$

$$y = f(x-1) + g(x+1) \quad Dg = (-1, b)$$

$$Df_{(x-1)} = a, x-1 < x \rightarrow a+1, x < x+1 \xrightarrow{+1} a+1, x+1 < x+2$$

$$Dg_{(x+1)} = -1, x+1 < x+2 \rightarrow -2, x < x+1$$

$$-2, x < x+1 \Rightarrow b-1 = a \rightarrow b = a+1$$

$$a-b = -1, a+1 = -2 \rightarrow a = -3$$

فلک غلامی حافظ کنون به طوع کند که التجاره در دولت شما آورد

پس

یکشنبه

۲۲ شعبان

15 February

Week 49

$$y_r = \sqrt{(r f(n))^{r-1}} \rightarrow |r f(n)|^{r-1} > 0 \quad (9)$$

$$\rightarrow Dg = Df \times \begin{bmatrix} r-1 \\ 0 \end{bmatrix}$$

$$f\left(\frac{n}{r}+1\right) \xrightarrow{n=0} \frac{a}{r}+1 = \frac{a}{r}+1 = \frac{a}{r}$$

$$\xrightarrow{n=r} \frac{-r}{r}+1 = -\frac{1}{r}$$

$$\rightarrow -\frac{1}{r} \leq \frac{a}{r}+1 \leq \frac{a}{r} \rightarrow Dg = Df = \begin{bmatrix} -\frac{1}{r} & \frac{a}{r} \end{bmatrix}$$

$$\frac{1}{r} \leq f(n) \leq \frac{a}{r} \rightarrow \frac{1}{r} \leq f(n) \leq \frac{a}{r}$$

$$\rightarrow \frac{1}{r} \leq f(n) \leq \frac{a}{r} \rightarrow \frac{1}{r} \leq f(n) \leq \frac{a}{r}$$

$$0 \leq \sqrt{(r f(n))^{r-1}} \leq \sqrt{a} \quad R_f = [0, a]$$

$$f(n) = |a-1| \quad (16)$$