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کلاس: آری

تکلیف شماره: ۲۲

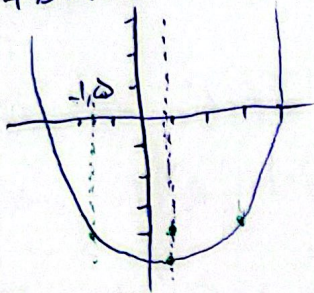
نام و نام خانوادگی: مهدی پورنژاد

$$x^2 - 2x + 1 = 0 \quad B^2 = 4\beta - 2 \Rightarrow \alpha + \beta = 2 \quad (1)$$

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

$$\frac{f\alpha + \beta^2}{4\beta^2} = \frac{\frac{1}{\beta} + \beta^2}{4\beta^2} = \frac{1 + \beta^4}{4\beta^2} = \frac{1 + 218\Delta\beta - 9\Delta^2}{4(23\beta - 6)} = \frac{218\Delta - 9\Delta^2}{11\Delta\beta - 20} = \frac{47\beta - 190}{23\beta - 10} = 19 \quad \checkmark$$

$$y = ax^2 + bx + c \quad (-1, 20, -4) \quad (2, -4) \quad x_{ext} = \frac{(2-1)\Delta}{2} = 0, 7\Delta \quad \frac{-b}{2a} = 1, 5 \quad (2)$$



$$x^2 + 2kx + \Delta = 0 \quad \frac{\sqrt{\Delta}}{|a|} = \frac{4}{3}K \quad \left[\frac{K^2}{2}\right] \quad (3)$$

$$f(K^2 - x_0) = \Delta \quad \frac{-2K + \sqrt{4K^2 - x_0}}{2} = \frac{-2K - \sqrt{4K^2 - x_0}}{2} \quad \frac{-K + \sqrt{K^2 - \Delta}}{-K - \sqrt{K^2 - \Delta}}$$

$$\sqrt{K^2 - \Delta} + K + \sqrt{K^2 - \Delta} = \sqrt{K^2 - \Delta} = \frac{4}{3}K \quad f(K^2 - x_0) = \frac{14}{9}K^2 \quad \frac{54}{9}K^2 - \frac{14}{9}K^2 = x_0$$

$$\frac{x_0}{a}K^2 = x_0 \quad K^2 = 9 \quad \left[\frac{K^2}{2}\right] = \left[\frac{9}{2}\right] = 4, 5 \quad \checkmark$$

$$y_{ext} = 1 \quad \left. \begin{array}{l} x_{ext} = \frac{(-2+2)}{2} = -1 \\ x_{ext} = \frac{(-2-2)}{2} = -1 \end{array} \right\} \begin{array}{l} ext \mid -1 \\ ext \mid 1 \end{array} \quad \alpha + \beta = \frac{-b}{a} = \frac{-2a}{a} = -2$$

$$(a+\beta)^2 = \alpha^2 + \beta^2 + 2\alpha\beta$$

$$\left. \begin{array}{l} y = ax^2 + bx + c \quad y = 9a + 2b + c \\ y = ax^2 + 2ax + c \quad y = 2\Delta a + \Delta b + c \end{array} \right\} \begin{array}{l} 4a = 1b \rightarrow 2a = b \\ f = \Delta + 2\alpha\beta \rightarrow 2\alpha\beta = -1 \\ \rightarrow \alpha\beta = -\frac{1}{2} = \frac{c}{a} \end{array}$$

$$y = ax^2 + 2ax + c \rightarrow y = -2ex^2 - fex + c \quad 1 = -2c + fc \rightarrow 2c = 1 \rightarrow c = \frac{1}{2} \quad \checkmark$$

$$-x^2 + 2x + m = f(x) \quad (4, 5\Delta) \quad (4)$$

$$\Delta > 0 \rightarrow x_0 + f(m) > 0 \rightarrow f(m) > 2\Delta \Rightarrow m > \frac{2\Delta}{f} \rightarrow m > 4, 2\Delta \rightarrow 4$$

$$f(t, \Delta) > 0 \rightarrow 2, f\Delta + 2f\Delta + m = f(2, 7\Delta) + m > 0 \rightarrow m > -f(2, 7\Delta)$$

$$y = mx^2 - 12x + 2m - 1$$

$$r = \frac{-\Delta}{fa} = \frac{-1ff + 20m^2 - fm}{fm} \rightarrow 20m^2 - fm - 1ff = 1m \rightarrow 20m^2 - 12m - 1ff = 0$$

$$y = 2x^2 - 12x + 1f \rightarrow x_{ext} = \frac{12}{4} = 3 \quad \checkmark$$

$$x^2 + r(a+1)x + 5a - 1 = 0$$

$$d : a \cdot \beta \rightarrow \text{درجه اول} \rightarrow d\beta = a^2 \rightarrow \frac{a}{d\beta} = a^2 \rightarrow \frac{2a-1}{1} = a^2 \rightarrow a^2 - 2a + 1 = 0$$

$$\rightarrow a = 1 \rightarrow \text{مقادیر} \checkmark$$

$$\begin{cases} x^2 + \sqrt{2}x - 2 = 0 \\ S = \frac{-b}{a} = \sqrt{2} \\ P = \frac{c}{a} = -2 \end{cases} \Rightarrow 2p^2 - Sp + 5S = 20 - \sqrt{2}(2\sqrt{2}) + 10 = 20 + 10 + 10 = 40$$

$$\frac{-\Delta}{4a} = \frac{-14 - 2fk}{4k} = -\frac{f}{k}x - \frac{f}{k} \rightarrow -\frac{f}{k} - 4 = -\frac{f}{k}x - \frac{f}{k} \Rightarrow -\frac{f}{k} - 2 = -\frac{f}{k}x \rightarrow x = \frac{1}{k} + \frac{1}{f}$$

$$kx^2 - x = k\left(\frac{1}{k} + \frac{1}{f} + \frac{1}{k}\right) - x = 0 \rightarrow \frac{1}{k} + \frac{1}{f}k - 1 = 0 \rightarrow 1 + \frac{1}{f}k - k = 0 \rightarrow k = f$$

$$x_{ext} = \frac{f}{f} = 1 \rightarrow x - f - 4 = -1 \checkmark \rightarrow y_{ext}$$

$$\begin{cases} y = -mx^2 + m(x+1) \\ y = -x - m \end{cases}$$

$$-mx^2 + m(x+1) = -x - m \rightarrow -mx^2 + (m+1)x + m+1 = 0 \rightarrow m > -1$$

$$-m - x = -mx^2 + m(x+1) \rightarrow -mx^2 + x + m + 1 = 0$$

$$\rightarrow -mx^2 + (m+1)x + m+1 = 0 \rightarrow m^2 + 2m + 1 + 4m^2 + 4m = 0$$

$$\rightarrow 5m^2 + 6m + 1 < 0 \rightarrow 5m^2 + 4m < -1 \rightarrow -1 < m < -\frac{1}{5}$$

مقدار صحیح نمی توان
یافت

$$x = \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \frac{-2 \pm \sqrt{2\Delta + 4m}}{-2} < \frac{9}{f} \rightarrow \pm \sqrt{2\Delta + 4m} < 9$$

$$0 \leq 2\Delta + 4m < 14 \rightarrow -4, 2\Delta \leq m < -2, 2\Delta \rightarrow m \in \{-3, -2, -1, 0\}$$

مقدار

$$u' = t \rightarrow t' - vt - \omega = 0 \rightarrow t = \frac{v \pm \sqrt{49}}{v} \rightarrow u' = \frac{v + \sqrt{49}}{v} \quad - \Lambda$$

$$u = \mp \sqrt{\frac{v + \sqrt{49}}{v}} \rightarrow S = 0 \quad P = -\frac{v + \sqrt{49}}{v}$$

$$\gamma p' - \gamma S P + \gamma S = \boxed{\omega + v\sqrt{49}}$$