

19, 25

Year: Month: Date: ()

المسألة الأولى

المسألة الثانية

المسألة الثالثة

$$y = (a+1)x^2 + x + 2$$

$$\text{فقط} \rightarrow x=2 \rightarrow \frac{-b}{2a} = 2 \Rightarrow \frac{-1}{2(a+1)} = 2 \Rightarrow \frac{1}{2(a+1)} = -2 \Rightarrow \frac{1}{2} = -2(a+1) \Rightarrow \frac{1}{2} = -2a - 2 \Rightarrow \frac{1}{2} + 2 = -2a \Rightarrow \frac{5}{2} = -2a \Rightarrow a = -\frac{5}{4}$$

$$a = -\frac{5}{4} \rightarrow y = -\frac{1}{4}x^2 + x + 2 \rightarrow \Delta = 1 \pm \sqrt{1 - 4(-\frac{1}{4})(2)} = \frac{-1 \pm 2}{-\frac{1}{2}} = 4, -2$$

$$f(m) = mm^2 - 8m + m \quad f(m) \quad - \quad + \quad -$$

$$\begin{cases} a < 0 \rightarrow m < 0 \\ \Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow 64 - 4(m)(m) = 64 - 4m^2 > 0 \end{cases}$$

$$64 - 4m^2 > 0 \rightarrow 64 > 4m^2 \rightarrow \frac{64}{4} > m^2 \rightarrow |m| < \frac{8}{2} \rightarrow -\frac{8}{2} < m < \frac{8}{2}$$

$$\text{I} \cap \text{II} \Rightarrow m \in (-\frac{8}{2}, 0) \rightarrow -\frac{8}{2} < m < 0$$

$$y = x^2 - 5x + p \quad S = \frac{5 \pm \sqrt{25 - 4p}}{2} = \frac{5 \pm \sqrt{25 - 4p}}{2}$$

$$p = \frac{5 - \sqrt{25 - 4p}}{2} \times \frac{5 + \sqrt{25 - 4p}}{2} = \frac{25 - (25 - 4p)}{4} = \frac{4p}{4} = p$$

$$y = x^2 - 5x + p \rightarrow y = x^2 - 2m + \frac{4}{9}$$

$$x^2 - 1x + m + 2 = 0$$

$$x^2 + \beta^2 = \alpha^2 + 2\alpha^2 + 2\beta^2 - \beta^2 = (\alpha^2 - \beta^2) + (2\alpha^2 + \beta^2)$$

$$\Rightarrow (\alpha^2 - \beta^2) + (2\alpha^2 + \beta^2) = (\alpha + \beta)(\alpha - \beta) + 2(\alpha^2 + \beta^2)$$

$$S = \frac{-b}{2a} = \frac{1}{2} = S \Rightarrow S = 2$$

$$S^2 - 2P = 14 - 2(m+1) = 14 - 2m - 2 = -2m - 14$$

$$S = 2 \rightarrow 2(14 - m - 2) - 2(\frac{\sqrt{14 - 2m}}{2}) = 14 - 2m - \sqrt{14 - 2m} = 12$$

$$14 - 2m = 2\sqrt{4n - 4m} \rightarrow m = 4$$

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تاریخ سوال

نام و نام خانوادگی

امتحان نمره

$$S(x, a) \quad , \quad C = a \rightarrow y = a(m - h)^2 + k \rightarrow y = a(x - 2)^2 + 4 \quad (2)$$

$$S(h, k) \quad | \quad a \rightarrow y = a(m - 2)^2 + 4 \xrightarrow{\text{مقایسه}} x = a(4) + 4 \rightarrow a = -1$$

$$\rightarrow y = -1(x - 2)^2 + 4 = -x^2 + 4x - 4 + 4 = -x^2 + 4x$$

$$x^2 + 4x + 4 = (x + 2)(x + 2) \rightarrow -4, 1 \rightarrow m_1 = 2, m_2 = -1$$

$$\rightarrow \frac{-1}{-4} \quad \frac{4}{1} \rightarrow (-1, 4) \leftarrow \text{جواب اول} \quad \checkmark$$

$$\alpha x^2 - 7x + 4\beta = 0$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} \quad \checkmark$$

$$S = \alpha + \beta = -b/a = \frac{7}{\alpha} \rightarrow \begin{cases} \alpha = 2 \rightarrow \beta = \frac{7}{2} \\ \alpha = -2 \rightarrow \beta = -\frac{7}{2} \end{cases} \quad \checkmark$$

$$P = \alpha \cdot \beta = c/a = \frac{4\beta}{\alpha} \rightarrow \alpha^2 = 4 \rightarrow \alpha = \pm 2$$

$$x^2 + mx - 2m = 0 \quad , \quad x^2 - 4\beta x = 1$$

$$\begin{cases} S = -b/a = -m \\ P = c/a = -2m \end{cases} \quad (2)$$

$$\begin{cases} \alpha^2 + m\alpha - 2m = 0 \\ \beta^2 + m\beta - 2m = 0 \end{cases}$$

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

$$\alpha^2 - m\beta = \alpha^2 + (\alpha + \beta)\beta = \alpha^2 + \beta^2 + \alpha\beta = S^2 - 2P + P = S^2 - P = 1$$

$$S^2 - P = m^2 + 4m - 1 \rightarrow m^2 + 4m - 1 = 0 \rightarrow (m - 2)(m + 6) = 0$$

$$\rightarrow m = 2 \quad \checkmark \quad \xrightarrow{m=2} y = x^2 + 2x - 4 \rightarrow S = -b/a = \frac{-2}{1} = -2 \quad \checkmark$$

$$f(u) = -2u^2 + 4u + 4 = 0 \rightarrow \begin{cases} u = -1 \\ u = 3 \end{cases} \checkmark \text{ کتب است!}$$

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۱۳ ساله

بار دوم

امید روزگار

$$f(u) = mu^2 + \epsilon u + \frac{m}{2} + V \rightarrow \frac{-\Delta}{\epsilon u} = \Lambda \checkmark$$

$$2m^2 + 2\Lambda m - 14$$

$$m = \begin{cases} 2 \\ -2 \end{cases} \checkmark \quad (1)$$

$$\frac{-\Delta}{\epsilon u} = \frac{-14m^2 + 2\Lambda m}{\epsilon m} = \Lambda \rightarrow 14m^2 + 2\Lambda m = 0 \rightarrow m = \frac{-2\Lambda}{28} = \frac{-\Lambda}{14}$$

$$f(u) = \frac{-2}{9}u^2 + \epsilon u + \frac{14\epsilon}{14} \rightarrow \boxed{-\epsilon\sqrt{2} + 4}$$

$$A(2,4), C: \epsilon \rightarrow (0, \epsilon) \rightarrow y = a(x-2)^2 + 4 \quad (2) \quad (9)$$

$$\rightarrow \epsilon a = -2 \rightarrow a = \frac{-2}{\epsilon} = \boxed{\frac{-1}{2} - a} \rightarrow y = \frac{-1}{2}(x-2)^2 + 4 = \boxed{\frac{-1}{2}x^2 + 2x + \epsilon}$$

$$\rightarrow \frac{-1}{2}x^2 + 2x + \epsilon \xrightarrow{\text{مجموعه}} \alpha, \beta \rightarrow \frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta}$$

$$\rightarrow \frac{\alpha + \beta}{\alpha\beta} = \frac{5}{2} = \frac{-2}{\epsilon} = \frac{-2}{\epsilon} = \left(\frac{-1}{2}\right) \checkmark$$

$$m=2, \epsilon - (\epsilon a + \epsilon)^2 + (4a^2 + 4a + 4) = 0 \quad (2) \quad (10)$$

$$\rightarrow \cancel{4a^2} - \cancel{4a} + 4 = 0, \quad 4a^2 - 4a - 1 = 0 \rightarrow 4a^2 - 4a - 1 = 0 \rightarrow a = 1, \frac{-1}{2}$$

$$a = 1 \rightarrow x^2 - 4x + (4 + 4 + 4) = 0 \rightarrow x^2 - 4x + 12 = 0 \rightarrow m = (4, 2) \checkmark$$

$$a = \frac{-1}{2} \rightarrow x^2 - \frac{1}{2}x + \left(\frac{1}{2} + 4 + 4\right) = 0 \rightarrow x^2 - \frac{1}{2}x + \frac{9}{2} = 0 \rightarrow m = 2, \left(\frac{2}{m}\right) \checkmark$$