

۲. معادلات: $y = (a-1)n^2 + n + 3$

سوال ۱:

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

۵

۵ $y = (\frac{1}{2}-1)n^2 + n + 3 \Rightarrow y = -\frac{1}{2}n^2 + n + 3$

$0 = -\frac{1}{2}n^2 + n + 3 \Rightarrow -n^2 + 2n + 6 = 0$

$n^2 - 2n - 6 = 0$

$(n-4)(n+2) = 0$

$n = 4$

x	x ₁	x ₂
f(x)	-	+

$f(x) = mx - \omega x + m$

$m < 0$ (I)

سوال ۲:

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۱۵ $\Delta > 0 \Rightarrow 4\omega - 4m^2 > 0$

$4\omega - 4m^2 > 0$

$-4m^2 > -4\omega$

$m^2 < \frac{\omega}{1} \Rightarrow \frac{\omega}{1} < \frac{m^2}{1}$

(II)

(I) $\cap$ (II) $\Rightarrow m \in (-\frac{\omega}{1}, 0)$

۲۰ $\alpha = \frac{3-\sqrt{5}}{2} \quad \beta = \frac{3+\sqrt{5}}{2}$

سوال ۳:

$S = \frac{3-\sqrt{5}}{2} + \frac{3+\sqrt{5}}{2} = \frac{6}{2} = 3$

$y = n^2 - 2n + \frac{1}{9} \times 9$

$P = \frac{3-\sqrt{5}}{2} \times \frac{3+\sqrt{5}}{2} = \frac{9-5}{4} = \frac{4}{4} = 1$

مربوط به سوال ۳

سوال ۴:

$2n^2 - 11n + m + 2 = 0 \quad \alpha < \beta \quad 2\alpha^2 + \beta^2 = 12$

$\alpha + \beta = \frac{11}{2} \Rightarrow 2\alpha^2 + \beta^2 = 12$

۳۰ $\alpha\beta = \frac{m+2}{2}$

$2\alpha^2 + \beta^2 = 12$

$14 - 2\alpha\beta + 2\alpha^2 = 12$

$14 - 2(\frac{m+2}{2}) + 2\alpha^2 = 12$

$14 - m - 2 + 2\alpha^2 - m - 2 = 12$

$M = \{x | x \in f\}$

Arman $2\alpha^2 - 11\alpha + m + 2 = 0$

$11\alpha - 2m = 0 \Rightarrow m = \frac{11\alpha}{2}$

$2\alpha^2 - 11\alpha + \frac{11\alpha}{2} + 2 = 0 \Rightarrow 2\alpha^2 - \frac{11\alpha}{2} + 2 = 0 \Rightarrow 4\alpha^2 - 11\alpha + 4 = 0 \Rightarrow (4\alpha-3)(\alpha-1) = 0$

$$S(x, y) \quad C = \omega$$

U^r

$$y = (n-h)^r + k \sim y = (n-r)^r + q$$

$$\omega = \frac{r}{n} \sim \underline{a = -1}$$

$$y = -(n-r)^r + q \sim y = -n^r + (n+r)$$

$$(n-r)^r < q \rightarrow -r < a - r < r$$

$$-(n^r - (n+r)) \rightarrow -(n-r)(n+1) = y$$

$$\underline{n = -\omega} \quad \underline{n = -1}$$

$$(-\omega, 1) \text{ bit } \sim -0 + 0 \leftarrow$$

$$\alpha n^r - \sqrt{n} + q\beta = 0 \quad \beta > 0$$

$$\frac{-b}{a} = \frac{+\sqrt{n}}{\alpha} = \alpha + \beta$$

$$V = \alpha + \beta \alpha \quad -r = \beta \alpha \rightarrow \beta = -\frac{r}{\alpha} \quad \text{و } -r = \beta \alpha \sim -r = -\beta \alpha \rightarrow \beta = \frac{r}{\alpha}$$

$$\frac{c}{a} = \alpha \beta \sim \frac{q\beta}{\alpha} = \alpha \beta \sim \alpha^2 \beta = q\beta \sim \alpha = \pm r$$

$$\boxed{-r = \alpha}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{1}{-r} + \frac{1}{\frac{r}{\alpha}} = \frac{1}{-r} + \frac{\alpha}{r} = \frac{-1 + \alpha}{r} = \frac{V}{r}$$

$$n^r + mn - r = 0 \quad \frac{c}{a} = -r = \alpha \beta$$

$$\alpha^r - m\beta = 1$$

$$\frac{-b}{a} = -m = \alpha + \beta \sim \alpha^r + \beta^r + \alpha\beta = m^r$$

$$(1) \quad \alpha^r + (\alpha\beta)\beta = 1 \sim \alpha^r + \beta^r + \alpha\beta = 1$$

$$-1/2 < m < 1 \rightarrow n^r - (m+1) = 0$$

$$\alpha^r + \beta^r - r = 1 \rightarrow m^r - r(-r) = r = 1$$

$$1 - r < 0 \quad \text{و } \alpha$$

$$m^r + r = 1 \quad m = \pm \sqrt{r}$$

$$m \geq r \rightarrow n^r + rn - r = 0$$

$$m^r + r = 1 \rightarrow 0$$

$$(m+r)(m-r) = 0$$

$$\Delta > 0$$

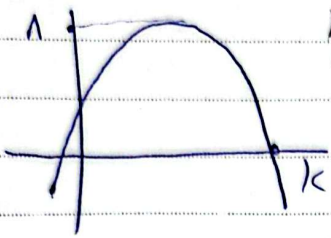
$$(1) m = -r \quad (2) m = +r$$

$$\alpha + \beta = -m \sim \underline{\alpha + \beta = -r}$$

Arman

$$f(x) = mn^2 + cn + \frac{m}{r} + v$$

سوال ۱



$$m < 0 \Rightarrow \Delta = \frac{-\Delta}{\epsilon a}$$

$$-(14 - f(m) \left(\frac{m+1}{x} \right))$$

$$= 1$$

$$-14 + 2m^2 + 21m = 1 \Rightarrow 2m^2 - 2m - 15 = 0$$

$$m^2 - m - 15 = 0$$

تست سوال ۱۰: $m = 4 \Rightarrow mn^2 + cn + 11$

$$\Delta = 14 - 144 < 0 \text{ غلط}$$

$$(m-4)(m+2) = 0$$

$$\Rightarrow m = 4 \quad \Rightarrow m = -2$$

$$m = -2 \Rightarrow -2n^2 + cn + 4 = 2$$

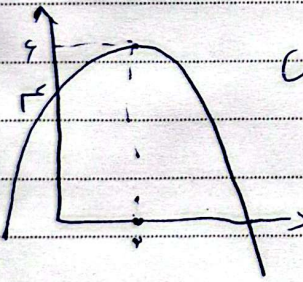
$$\Delta > 0 \text{ غلط}$$

۵

$$f(x) = -2n^2 + cn + 4 \Rightarrow 0 = +n^2 - 2n - 2$$

$$(n-3)(n+1) = 0 \Rightarrow n = 3 = k$$

$$n = -1$$



مسئله ۹ = ؟

سوال ۹

$$f(x) = a(n-h)^2 + k$$

$$2 = a(n-2)^2 + 4$$

$$0 = \epsilon a + 4 \Rightarrow -2 = \epsilon a \Rightarrow a = -\frac{1}{2}$$

$$2 = -\frac{1}{2}(n-2)^2 + 4 \Rightarrow 2 = -\frac{n^2}{2} - 2 + 2n + 4$$

۵

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

$$0 = 2 = -\frac{n^2}{2} + 2n + 4 \Rightarrow n^2 - 4n - 8 = 0$$

$$\frac{-2}{-\frac{1}{2}} = -\frac{1}{2}$$

$$\frac{-2}{-\frac{1}{2}} = -\frac{1}{2}$$

$$x^p - (r_1 + r_2)x + (r_1^p + r_2^p + r_3) = 0$$

سوال 10

$$x = 2$$

$$r^p - 1a - 1 + r_1^p + r_2^p + r_3 = 0$$

$$r_1^p - 2a - 1 = 0 \Rightarrow r_1 + 12 = 13 = \Delta \quad a = \frac{r_1 + r_2}{4} \begin{cases} 1 \\ -\frac{1}{r} \end{cases}$$

$$a = 1 \Rightarrow r^p - 1r + 12 = 0 \Rightarrow 4r - r^2 = 12 = \Delta$$

$$\frac{4 \pm \sqrt{4}}{2} \begin{cases} 4 \\ 2 \end{cases}$$

(5)

$$a = -\frac{1}{r} \Rightarrow r^p - \frac{1}{r} + \frac{r}{r} = 0 \Rightarrow \Delta = \frac{4r}{9} - \frac{r^2}{r} = \frac{16}{9}$$

$$\frac{\frac{1}{r} \pm \frac{r}{r}}{2} \begin{cases} \frac{1}{r} \\ \frac{r}{r} \end{cases}$$

$$\frac{1}{r} - \frac{r}{r} = \frac{1}{r} - 1 = \frac{1-r}{r}$$