

۱۴، ۷۵

$$\alpha\beta = 2, \alpha + \beta = -1 \checkmark$$

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

$$\Rightarrow \frac{\beta^2 + \frac{1}{\beta}}{\alpha\beta^2} = \frac{\beta^2 + \frac{2}{\beta} \times 2}{\alpha\beta^2}$$

برای سادگی

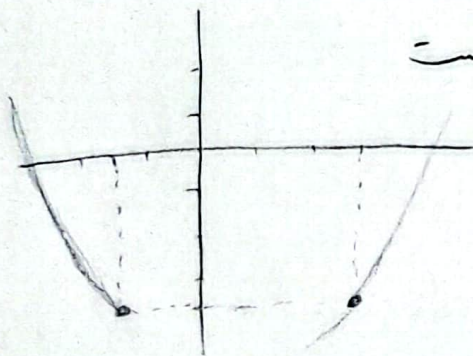
$$\begin{aligned} -2 - \omega\beta &= \beta^2 \\ 2\omega + \omega^2\beta &= \beta^2 \end{aligned}$$

$$\frac{2\omega\beta + 10}{-(2\beta + 10)} = \boxed{+19}$$

(۱)

$$\frac{2\omega\beta + 10}{-2\omega\beta - 10} = \frac{-218\beta - 9\omega}{\beta(-2\omega\beta - 10)} \Rightarrow \frac{2\omega\beta + 10}{-2\omega\beta - 10} = \frac{-218\beta - 9\omega}{\beta(-2\omega\beta - 10)}$$

$$\beta^2 = 10 + 2\omega\beta$$



(۲) چون عرض دو نقطه برابر است طول رأس سمعی این دو نقطه است

$$\frac{-1, \omega + 2}{2} = \frac{2}{2} = 1$$

(۲)

$$\boxed{1, \omega} = 2 \times \text{طول رأس سمعی}$$

$$\sqrt{2K^2 - 20} = \frac{2}{3}K \Rightarrow \frac{16}{9}K^2 = 2K^2 - 20 \Rightarrow 16K^2 = 18K^2 - 180 \Rightarrow 2K^2 = 180 \Rightarrow K^2 = 90$$

(۳) (۱، ۷۵)

$$180 = 2K^2 \Rightarrow K^2 = 90 \Rightarrow \frac{K^2}{2} = \boxed{\frac{90}{2}} \rightarrow \left[\frac{K^2}{2}\right] = 45$$

$$\alpha + \beta = \frac{-2}{2} = -1 \Rightarrow \alpha + \beta = -1 \Rightarrow \alpha = -1 - \beta$$

$$\beta^2 + \alpha^2 = (\alpha + \beta)^2 - 2\alpha\beta \Rightarrow 1^2 - 2\alpha\beta = 1 \Rightarrow -2\alpha\beta = 0 \Rightarrow \alpha\beta = 0$$

$$a(x^2 - 11x + \frac{49}{2}) = y \quad x=2 \Rightarrow a(9 - 22 + \frac{49}{2}) = y = \frac{29a}{2} \Rightarrow a = \frac{2y}{29}$$

$$y = a\alpha\beta = \frac{2y}{29} \times \frac{49}{2} = \boxed{\frac{49y}{29}}$$

$$-x^2 + \omega x + m = 0 \Rightarrow x^2 - \omega x - m = 0$$

$$-m = x_1, x_2 \quad \omega = x_1 + x_2 \Rightarrow \omega + \sqrt{\omega^2 + 4m} < \frac{4}{2} \Rightarrow \omega + \sqrt{\omega^2 + 4m} < 2$$

$$\sqrt{\omega^2 + 4m} < 2 - \omega \Rightarrow \omega^2 + 4m < 4 - 4\omega + \omega^2 \Rightarrow 4m < 4 - 4\omega \Rightarrow m < 1 - \omega$$

$$\omega^2 + 4m \geq 0 \quad m \geq \frac{-\omega^2}{4} \quad m \geq -9$$

$$\{-1, -2, -3, -4, -5, -6, -7, -8, -9\} \checkmark m$$

$$m > 0 \quad \frac{2m^2 - \varepsilon m - 1 \varepsilon \varepsilon}{\varepsilon m} = 2 \Rightarrow \Delta m = 1 \varepsilon \varepsilon - \varepsilon m - 2m^2 \quad (2) \quad (4)$$

$$1 \varepsilon \varepsilon - 1 \varepsilon m - 2m^2 = 0 \Rightarrow \omega m^2 - 2m - \varepsilon \varepsilon = 0 \quad \Delta = \sqrt{20 + 9} = \sqrt{29}$$

$$m = \frac{\varepsilon \pm \sqrt{29}}{2} = \frac{1 \pm \sqrt{29}}{2} \Rightarrow m = 2 \quad \frac{-b}{2a} = 2 = \frac{1 \varepsilon}{\varepsilon} = \boxed{2} \checkmark$$

$$\alpha \beta = a^2 - 2(a+1) = \alpha + \beta \quad 2a - 1 = \alpha \beta = a^2$$

$$2a - 1 = a^2 \Rightarrow a^2 - 2a + 1 = 0 \quad (a-1)^2 = 0 \Rightarrow a = 1$$

$$2^2 + 2(a+1)2 + 2a - 1 = 0 \Rightarrow 2^2 + \varepsilon 2 + 1 = 0 \quad \alpha \beta = 1 \quad \alpha + \beta = -\varepsilon$$

$$\boxed{\alpha = -2 + \sqrt{5} \quad \beta = -2 - \sqrt{5} \quad a = 1} \checkmark$$

$$\left. \begin{aligned} P = -\omega = 2, 2, 2, 2, 2 \\ S = 2_1 + 2_2 + 2_3 + 2_4 + 2_5 = 0 \end{aligned} \right\} \Rightarrow 2P^2 - 2SP + 2S = 2 \times 2\omega = \boxed{4} \quad (1) \quad (9)$$

$$-\frac{b}{2a} = \frac{1}{2} = \frac{\varepsilon}{2K} \Rightarrow K = a, b = -\varepsilon \Rightarrow -\frac{\varepsilon}{2K} = \frac{1}{K}$$

$$K\left(\frac{1}{K}\right)^2 - \varepsilon\left(\frac{1}{K}\right) - 4 = 0 \quad \text{و یاسی} = -\frac{\varepsilon}{K} - 4$$

$$-\varepsilon\left(\frac{1}{K}\right) - \varepsilon = -\frac{\varepsilon}{K} - 4 \Rightarrow -\frac{1}{K} - \varepsilon = -\frac{\varepsilon}{K} - 4 \Rightarrow \frac{\varepsilon}{K} = 2 \Rightarrow K = 2$$

$$\text{عرض} = -2 - 4 = \boxed{-6} \checkmark$$

(1) اگر دو معادله با هم برابر قرار دهیم و نتایج به هم می‌رسانیم، می‌توانیم این نتیجه را داشته باشیم

$$-m - 2 = m2^2 + m2 + 1 \Rightarrow -m2^2 + m2 + 2 + 1 + m = 0$$

$$\Rightarrow m2^2 - 2(m+1) - m + 1 = 0 \Rightarrow m^2 + 2m + 1 + \varepsilon m + 1 = \Delta$$

$$\Rightarrow \Delta = m^2 + \varepsilon m + 2 = (m+1)(m+1) \Rightarrow (m+1)(m+1) < 0$$

$$m = -\frac{1}{\omega} \quad m = -1 \Rightarrow m > -1$$

$$\boxed{0} = m \text{ اعداد صحیح}$$

$$P = \alpha\beta = r \rightarrow \beta = \frac{r}{\alpha}$$

$$\frac{r}{a} \times \frac{\alpha}{\beta^r} + \frac{\beta^r}{a} = \frac{\alpha^r}{a} + \frac{\beta^r}{a} = \frac{S^r - rSp}{a} = \frac{9a}{a} = \boxed{19}$$

$$n_s = \frac{-b}{r_a} = \frac{n_A + n_B}{r} : \text{نسبت هم } B, A \text{ هم } -r$$

$$n_s = -\frac{a+r}{r} = -1 = -\frac{b}{r_a} \rightarrow S = -\frac{b}{a} = \boxed{-r}$$

$$y-1 = a(n-(-1))^r \rightarrow y = an^r + r_a n + a + 1 \quad \leftarrow \text{معادله هم}$$

$$\alpha^r + \beta^r = a \rightarrow S^r - r\rho = a \quad \frac{S = -r}{\rho = \frac{a+1}{a}} \rightarrow (-r)^r - r\left(\frac{a+1}{a}\right) = a \rightarrow a = -\frac{r}{r}$$

$$\text{عرض از مبدأ} = a + 1 = \left(\frac{1}{r}\right)$$

$$n^r = t \rightarrow t^r - vt - a = 0 \rightarrow t = \frac{v \pm \sqrt{49}}{r} \rightarrow n^r = \frac{v + \sqrt{49}}{r} \quad -1$$

$$n = \pm \sqrt{\frac{v + \sqrt{49}}{r}} \rightarrow S = 0 \quad P = -\frac{v + \sqrt{49}}{r}$$

$$rp^r - rSp + rS = \boxed{a9 + v\sqrt{49}}$$