

$$\alpha^r - \alpha\alpha + r = 0$$

$$r\alpha + \beta^{\omega}$$

WIVA

سؤال 1

$$\beta^r - \alpha\beta + r = 0$$

$$\frac{r\alpha + \beta^{\omega}}{\alpha\beta^r}$$

β, α

$$\alpha^r + \alpha\alpha + r = 0 \quad \beta^r = \beta \cdot \beta^r = \beta(\omega\beta - r) = \alpha\beta^r - r\beta = 9.22\beta - 10$$

~~Handwritten scribbles and crossed-out equations.~~

اذا سؤال بيت اضفها

$$(r_3 - r)$$

$$(-1/\omega, -1)$$

سؤال 2

$$y = ax^r + bx + c$$

$$-r = 9a + 2b + c$$

$$= 9.0 = 9.1\omega a + 1.0b$$

$$-r = 2.2\omega a + 1.0b + c$$

$$r_1 + r_2 = -\frac{b}{a}$$

$$f(r) = f(1/\omega) = -r \quad 9a + 2b + c - 2.2\omega a + 1.0b + c = 0$$

$$9.1\omega a + 1.0b = 0$$

$$r_1\omega b = -4.1\omega a$$

$$b = -\frac{4.1\omega}{r_1\omega} a$$

$$b = -\frac{4.1\omega}{r_1\omega} a$$

$$b = -1.0a$$

$$r_1 + r_2 = -\frac{b}{a}$$

$$+ \frac{1.0a}{a} = 1.0$$

$$\alpha^r + rK\alpha + \omega = 0$$

$$\frac{r}{r} K = \frac{r}{r} K$$

سؤال 3

$$\frac{\Delta}{1a}$$

$$\Delta = b^r - fac$$

$$f(K^r - \frac{r}{r} K)$$

$$\sqrt{r(K^r - \frac{r}{r} K) - r_0} = \frac{r}{r} K = 9.4(K^r - \frac{r}{r} K) = \frac{14}{9} K^r$$

$$r(K^r - \frac{r}{r} K) - r_0 = \frac{14}{9} K^r$$

$$\frac{34K^r - 14K^r}{9} = r_0 = 9.2.0K^r = r_0 = 9.4K = 13$$

$$\frac{K^r}{r} = 9.4\frac{r}{r} = 9.4$$

صوت سؤال 4 ببيت جواب

$$\frac{9}{r} = r, \omega \leq r \quad \left[\frac{K^r}{r} \right] = [r, \omega] = r$$

$$B = (-\omega, y)$$

$$A = (r, y)$$

$$\alpha^r + \beta^r = \omega$$

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

سؤال 4

عن رأس سبي

Arman

$$(-1, 1) \quad (-\omega, y) \quad (r, y)$$

سوال ۴

$$a^r + \beta^r = 0 \quad f(x) = a(x-h)^r + k \Rightarrow f(x) = a(x+1)^r + 1$$

$$f(a) = a(a+1)^r + 1 = 0 \Rightarrow a(a+1)^r = -1 \Rightarrow (a+1)^r = (\beta+1)^r$$

$$f(\beta) = a(\beta+1)^r + 1 = 0 \Rightarrow a(\beta+1)^r = -1$$

$$a^r - \beta^r + ra - r\beta = 0 \Leftrightarrow a^r + ra = \beta^r + r\beta$$

$$(a^r - \beta^r)(a + \beta) + r(a - \beta) = 0 \Rightarrow (a - \beta)[(a + \beta) + r] = 0$$

$$x \text{ نمی تواند مقادیر اینها را داشته باشد} \quad a - \beta = 0 \Rightarrow \beta = a$$

$$\frac{\beta + a}{r} = -1$$

$$\beta + a = -r$$

$$\frac{(a + \beta)^r}{r} = \frac{a^r + \beta^r}{\omega} + \frac{ra + r\beta}{-1}$$

$$\Rightarrow a\beta = -\frac{1}{r}$$

$$a\beta = \frac{c}{a} \Rightarrow \frac{a+1}{a} = -\frac{1}{r} \Rightarrow a = -\frac{r}{r+1}$$

$$f(x) = a(x^r + rx + 1) + 1 = ax^r + rax + (a+1) \quad c = a+1$$

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

$$\left(\frac{1}{r+1}, 0\right)$$

نقطه صفر و در نقطه

سوال ۵
 $\beta, \alpha < \frac{9}{r}$

$$-x^r + \omega x + m = 0 \quad a = -1 \quad b = \omega \quad c = m$$

$$x^r - \omega x - m = 0 \quad b^r - fac > 0$$

$$ra + fm \geq 0 \quad rm < -ra \quad m > -\frac{ra}{f}$$

$$m \in \{-4, -0, -r, \dots\} \quad a + \beta = -\frac{b}{a} = \frac{\omega}{1} \quad h = \frac{a + \beta}{r} = \frac{r\omega}{r}$$

1, 0

$$-x^r + \omega x = -m$$

$$\frac{9}{r} = f(\omega)$$

$$g\left(\frac{9}{r}\right) = -\left(\frac{9}{r}\right)^r + \omega\left(\frac{9}{r}\right) = \frac{9}{r}$$

$$g(x) = -x^r + \omega x \quad y = -m$$

$$\frac{9}{r} > -m$$

$$-\frac{9}{r} < m$$

$$+\frac{m}{r} > -\frac{ra}{r}$$

$$m > -4, ra$$

<=

Arman

$$\Rightarrow m \in \{-r, -1, 0, 1, r, \dots\}$$

بسیار m وجود دارد

سوال 1 ✓

$$\beta^f = \beta \cdot \beta^r = \beta(2\beta - 10) = 2\beta^2 - 10\beta = 2\beta(\beta - 5) - 10\beta = 11\beta - 44$$

$$-44 - 10\beta = 10\beta - 44 \quad \beta^a = \beta \cdot \beta^a = \beta(10\beta - 44) = 10\beta^2 - 44\beta$$

$$10\beta(2\beta - 5) - 44\beta = 20\beta^2 - 50\beta - 44\beta = 4\beta^2 - 210$$

$$2a + \beta^a = 2a + (4\beta^2 - 210) \quad a = a - \beta$$

$$2(a - \beta) + 4\beta^2 - 210 = 2a - 4\beta + 4\beta^2 - 210 = 4\beta^2 - 4\beta - 210$$

$$2\beta^2 = 2(a - \beta) = 2a - 2\beta \quad 4\beta^2 - 4\beta - 210 = 2a - 2\beta \quad 4\beta^2 = 2a - 2\beta + 210$$

$$2\beta^2 - 10 = 19 \quad 19 = 19 \times 10$$

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

سوال 4 ✓

$$y = mx^2 - 12x + 2m - 1 \quad \min | -2 - \frac{\Delta}{4a}$$

$$- (144 - 4m(2m - 1)) = 4 \quad -144 + 4m^2 - 4m$$

$$4(-36 + 2m^2 - m) = 4 \quad 2m^2 - 34m - 34 = 4m = 3$$

$$2m^2 - 34m - 34 = 4m = 3$$

$$\frac{3 \pm \sqrt{9 + 4 \times 4 \times 17}}{2} \quad \frac{3 + 2\sqrt{17}}{2} = 2 \quad y = 2x^2 - 12x + 14$$

$$x_5 = \frac{12}{4} = 3 = 4 \quad x = 2$$

سوال 5

2

$$t = x^r$$

$$x^r - vx^r - a = 0 \Rightarrow x^r + vx^r - a = 0$$

1, 2, 3

سوال 1

$$P = \frac{c}{a} \quad S = -\frac{b}{a}$$

$$rP^r - rSP + rS$$

$$a \rightarrow \frac{r}{1} x + vx + a + 1x$$

$$P = \frac{-a}{1} = -a \quad S = \frac{+v}{1} = v$$

$$= 149$$

$$y = Kx^r - rx - a$$

$$y = -rx - a$$

سوال 4

$$Kx^r - rx - a = -rx - a$$

$$Kx^r = r$$

$$x = \pm \sqrt{\frac{r}{K}}$$

$$\omega \omega x = \frac{\beta + a}{r}$$

$$-\frac{b}{a}$$

$$= \text{معينه}$$

$$\beta + a = -\frac{b}{a}$$

$$-\frac{b}{a} = -\frac{b}{a}$$

$$-\frac{b}{ra}$$

$$-\frac{b}{ra} = \pm \sqrt{\frac{r}{K}}$$

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

$$\frac{r}{rK} = \frac{r}{rK}$$

$$\frac{r}{K} = \pm \sqrt{\frac{r}{K}}$$

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

$$= 149$$

$$x = r$$

$$y = rx^r - rx - a$$

$$= -a \quad y = \frac{r - r - a}{-1}$$

$$y = -1$$

سوال 6

$$y = -mx^r + mx + 1$$

$$y = -m - a$$

$$-mx^r + mx + 1 = -m - a$$

$$-mx^r + mx + 1 + m + a = 0 \quad a = -m \quad b = m+1 \quad c = m+1$$

$$-mx^r + mx + 1 + m$$

$$x(m+1)$$

$$= mx^r - (m+1)x - m+1 = 0 \Rightarrow a = m \quad b = -(m+1) \quad c = -(m+1)$$

$$\Delta = b^2 - 4ac \quad (m+1)^2 + 4m(m+1) < 0 \quad (m+1)(m+1) + 4m(m+1) < 0$$

$$m+1 = 0 \quad m = -1$$

$$(m+1)[m+1+4m] < 0$$

$$\Delta m+1 = 0 \quad m = -\frac{1}{2}$$

$$-1 < m < -\frac{1}{2}$$

سوال 7

$$ar + r(a+1)r + ra - 1 = 0$$

$$r + \beta = -r(a+1)$$

$$\alpha\beta = ra - 1$$

$$ar = ra - 1$$

$$ar - ra + 1 = 0 \quad (a-1)r = 0$$

$$a = 1$$

α, α, β roots

$$\frac{a}{\alpha} = \frac{\beta}{a}$$

$$ar = \alpha\beta$$

سوال 13



Arman

$$x = \frac{-\omega \pm \sqrt{4\omega - 4(-1)(m)}}{-2} < \frac{9}{2} \leadsto \pm \sqrt{4\omega + 4m} < 9$$

$$\bullet \leq 4\omega + 4m < 14 \leadsto -4\omega \leq 4m < -9 \leadsto -\frac{4\omega}{4} \leq m < -\frac{9}{4} \leadsto m \in \left\{ -4, -5, -6, -7 \right\}$$

چون عبارت زیر را می بینیم
است باید از منفی باشد

$$x^2 = t \rightarrow t^2 - vt - \omega = 0 \rightarrow t = \frac{v \pm \sqrt{4\omega}}{2} \xrightarrow{x^2} x^2 = \frac{v \pm \sqrt{4\omega}}{2}$$

$$x = \pm \sqrt{\frac{v \pm \sqrt{4\omega}}{2}} \leadsto s = 0, p = -\left(\frac{v \pm \sqrt{4\omega}}{2}\right)$$

$$2p^2 - 3sp + 2s = 2p^2 = 2\left(\frac{v \pm \sqrt{4\omega}}{2}\right)^2 = \frac{1}{2}(4\omega + 4\omega + 1 \pm \sqrt{4\omega}) = 4\omega + v\sqrt{4\omega}$$