

$$\frac{f(\alpha^* + \beta^*)}{r_2} = \frac{f(26)}{r_1} = 19$$

$$b_{\text{reg}} = -\frac{b}{a} = \frac{1.04}{1} = 1.04$$

$$\Rightarrow \frac{1}{a}K^r - \frac{r}{u}K^r + \omega = 0 \Rightarrow \frac{\omega}{a}K^r = 0 \Rightarrow K^r = a \Rightarrow \left[\frac{1}{r} \right] = \left[\epsilon, \omega \right] = r$$

$x=0 \Rightarrow y = \frac{1}{3} \Rightarrow$ مرکز انحناء سمتی

$$\textcircled{1} \cap \textcircled{4} \rightarrow -\frac{r_0}{r} < m < -\frac{r}{r} \Rightarrow -r_0 < m < -r \Rightarrow m \text{ between } -r_0 \text{ and } -r$$

تابع دارای ی‌شیم است که مقدار آن $\Delta < 0$ و $m > 0$ است پس:

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

$$y_3 = 2 \Rightarrow \frac{-\Delta}{4m} = 2 \Rightarrow \frac{4m^2 - 4m - 144}{4m} = 2 \Rightarrow 4m^2 - 12m - 144 = 0$$

$$\xrightarrow{+r} 4m^2 - 12m - 144 = 0 \Rightarrow$$

$$m = \frac{3 \pm \sqrt{129}}{4}$$

$$\xrightarrow{m > 0} m = \frac{3 + \sqrt{129}}{4} = 2$$

$$\Rightarrow y = 2x^2 - 12x + 144 \Rightarrow \alpha_3 = -\frac{b}{2a} = 2 \Rightarrow \text{مقدار } \alpha = 2 \checkmark$$

$$y = x^2 - 5x + p$$

$$s = -2a - 2 \Rightarrow \alpha + \beta = -2a - 2$$

$$p = 2a - 1 \Rightarrow \alpha\beta = 2a - 1$$

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

$$(a-1)^2 = 0 \Rightarrow \boxed{a=1} \checkmark$$

$$x^2 = t \Rightarrow t^2 - vt - a = 0 \Rightarrow \Delta = 49 - (4)(-5) = 49 \Rightarrow$$

$$t = \frac{v \pm \sqrt{49}}{2} \rightarrow t_1 = \frac{v + \sqrt{49}}{2} \checkmark$$

$$t_2 = \frac{v - \sqrt{49}}{2} \times \text{غ} \rightarrow$$

$$x^2 = \frac{v + \sqrt{49}}{2} \rightarrow \alpha_{1,2} = \pm \sqrt{\frac{v + \sqrt{49}}{2}} \Rightarrow s = 0, p = \frac{v + \sqrt{49}}{2} \Rightarrow$$

$$x p^2 - x p s + x s = x p^2 = x \left(\frac{v + \sqrt{49}}{2} + 14\sqrt{\frac{v + \sqrt{49}}{2}} \right) = 11\sqrt{49} + 14\sqrt{49} = 25\sqrt{49} \checkmark$$

$$\alpha_3 = -\frac{b}{2a} = \frac{f}{2k} \Rightarrow y_3 = k \times \frac{14f}{2k} - \frac{14}{2k} - 4 = \frac{-4k - f}{k}$$

$$y_3 = -f \times \frac{f}{2k} - f = -\frac{f^2}{2k} - f = \frac{-fk - f^2}{k} \Rightarrow$$

$$-4k - f = -fk - f^2 \Rightarrow 2k = f \Rightarrow k = 2 \Rightarrow y = 2x^2 - 4x - 4 \Rightarrow$$

$$\alpha_3 = -\frac{b}{2a} = \frac{f}{2} = 1 \Rightarrow y_3 = 2 - 4 - 4 = -6 \checkmark$$

باید Δ و m را بررسی کنیم

$$-mx^2 + mx + 1 = -m - x \Rightarrow -mx^2 + (m+1)x + m+1 = 0 \xrightarrow{\Delta < 0}$$

$$(m+1)^2 + 4m(m+1) < 0 \Rightarrow (m+1)(5m+1) < 0$$

$$\frac{m}{-1} \quad \frac{-1}{5} \quad \frac{m}{+} \quad \frac{-1}{5} \quad \frac{m}{+}$$

$$\Rightarrow m \in (-1, -\frac{1}{5}) \Rightarrow \text{مقدار } m \text{ در این بازه است.} \checkmark$$