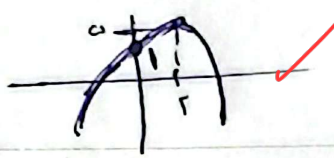
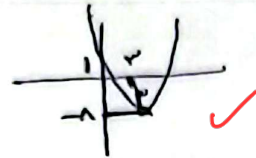


۱) $۲x^۲ - ۴x + ۱ \Rightarrow \text{ext} \mid -\frac{b}{۲a} = 1$ min
 $y_s = ۲ - ۴ + ۱ = -1$ ✓ ۱۶/۷۵

۲) $-۲x^۲ + ۳x - ۵ \Rightarrow \text{ext} \mid -\frac{b}{۲a} = -\frac{۳}{-۴} = \frac{۳}{۴}$ y_s = -۲(\frac{۳}{۴})^۲ + ۳(\frac{۳}{۴}) - ۵ = -\frac{۳۱}{۸}
 $y_s = -\frac{۹}{۲} + \frac{۹}{۴} - ۵ = -\frac{۲۹}{۲}$ max

۳) $x^۲ - ۹x + ۱$
 $x_s = -\frac{b}{۲a} = ۴.۵$
 $y_s = ۹ - ۸۱ + ۱ = -۷۱$



۴) $-x^۲ + ۴x + ۱$
 $x_s = ۲$ $y_s = ۵$

$K(x-\alpha)(x-\beta)^۲ = K(x^۳ + (-۲\beta - \alpha)x^۲ + (۲\alpha\beta + \beta^۲)x - \alpha\beta^۲)$
 $S = \alpha + \beta = 1$ $P = \alpha\beta = -۲$
 $\alpha\beta^۲ = -۲$
 $x^۲ - x - ۲ = 0 \Rightarrow (x-۲)(x+1) = 0 \Rightarrow x = -1, ۲$

$\Rightarrow -۲ + K + ۹ - ۲ = 0 \Rightarrow K = -۳$ K = -۳

$\alpha\beta^۲ = \frac{1}{K} \Rightarrow (\alpha\beta)\beta = \frac{1}{K} \Rightarrow \beta = -\frac{1}{\epsilon}$ \alpha = ۱

سوال کمال است $f(-۲\beta - \alpha) = K \Rightarrow K = -۲۰$

$x^۲ - ۲mx + m$ $\rightarrow ۲m - ۲\sqrt{m} - 1 = 0 \xrightarrow{\sqrt{m}=t} ۲t^۲ - ۲t - 1 = 0 \xrightarrow{a+b+c} t=1, t=-\frac{1}{۲}$

$(\sqrt{\alpha} - \sqrt{\beta})^۲ = ۱ \Rightarrow \alpha + \beta - ۲\sqrt{\alpha\beta} = 1 \Rightarrow (۲\sqrt{m})^۲ = (۲m - 1)^۲$
 $\rightarrow ۹m^۲ - ۹m + 1 = ۴m$

$\sqrt{m} = 1 \rightarrow m = 1$
 $\sqrt{m} = \frac{1}{۲} \rightarrow m = \frac{1}{۴}$
 $۲x^۲ - mx - m = P = -\frac{m}{۲}$
 If $m = 1 \Rightarrow -\frac{1}{۲}$
 If $m = \frac{1}{۹} \Rightarrow -\frac{1}{۱۸}$
 $۹m^۲ - 1. m + 1 = 0 \Rightarrow m = 1, \frac{1}{۹}$

$۲x^۲ - mx - m = 0 \xrightarrow{m=1} ۲x^۲ - x - 1 = 0 \rightarrow \beta = \frac{c}{a} = -\frac{1}{۲}$

$۲x^۲ - (m+۲)x + m \xrightarrow{\text{عوض}} x = 1, \frac{m}{۲}$

$S = \frac{(m/۲ - 1)m}{۲} \Rightarrow \frac{3^۲ - 1}{۲} = \frac{۳}{۲}$
 $\Rightarrow m^۲ - ۲m - ۳ = 0 \Rightarrow (m-۳)(m+1) = 0 \Rightarrow m = -1, ۳$

$x^۲ - mx + 1$
 If $m = -1 \Rightarrow x_s = -\frac{1}{۲}$
 If $m = ۳ \Rightarrow x_s = \frac{۳}{۲}$ ✓ ۲

$$ax^r + px + a$$

$$y_s = \frac{-d}{\epsilon a} = \frac{\epsilon a - 9}{\epsilon a} = \frac{v}{\wedge}$$

مقادیر min دارد

$$2\epsilon a^r - v\epsilon = 2\wedge a$$

$$\div \epsilon \downarrow 2\epsilon a^r - 2\wedge a - v\epsilon = 0$$

✓

$$a = \frac{19}{\wedge} = 2$$

$$\frac{-9}{\wedge} \Rightarrow \text{غلط}$$

$$\wedge a^r - v a - \frac{v}{\wedge} = 0 \Rightarrow a^r - v a - 1\epsilon \epsilon = 0, (a-19)(a+9) = 0$$

$$x^r - (a+1)x + a \rightarrow \text{مجموع ضرایب} = 0$$

دو عدد زوجتول

$$x = 1 \text{ و } 2 \Rightarrow x^r - \epsilon x + 2 \Rightarrow a = 2$$

$$x^r - 1 \cdot x + b$$

$$s = \frac{-b}{a} = 1 \Rightarrow \alpha_1 + \alpha_1 + 2 = 1 \Rightarrow 2\alpha_1 = \wedge \Rightarrow \alpha_1 = \frac{\epsilon}{2}$$

$$\alpha_2 = 2$$

$$\rightarrow (\epsilon \times 2) - (1 \times 2) = 21$$

$$y = -ax^r + ax + 2 \quad \alpha_s = \frac{-a}{-2a} = \frac{1}{2} \Rightarrow -\frac{1}{\epsilon} a + \frac{1}{2} a + 2$$

$$y = 2bx^r - bx - 1 \Rightarrow \text{if } \alpha = \frac{1}{\epsilon} \Rightarrow \frac{1}{\epsilon} b - \frac{1}{\epsilon} b - 1$$

$$\alpha_s = \frac{b}{\epsilon b} = \frac{1}{\epsilon}$$

$$\frac{b}{\wedge} - \frac{b}{\epsilon} - 1 = \frac{1\epsilon}{19} - 2 + 2 \Rightarrow -\frac{b}{\wedge} = \frac{2}{\epsilon} \Rightarrow b = -9$$

$$r\omega \alpha^r + \epsilon x + \beta$$

$$\beta = \frac{c}{a} = \frac{\beta}{r\omega \alpha} = \alpha \beta \Rightarrow r\omega \alpha^r = 1 \Rightarrow \alpha = \pm \frac{1}{\omega}$$

$$\text{if } \alpha = \frac{1}{\omega} \Rightarrow s = -\frac{\epsilon}{\omega} \Rightarrow \beta = -1$$

$$\text{if } \alpha = -\frac{1}{\omega} \Rightarrow s = \frac{\epsilon}{\omega} \Rightarrow \beta = 1$$

$$-\omega x^r + \epsilon x + 1 \Rightarrow \alpha_s = \frac{-\epsilon}{-\omega} = \frac{\epsilon}{\omega} \quad y_s = \frac{1\epsilon}{\omega}$$

$$-\frac{b}{a} = a + b = a^r + b^r - 1\epsilon$$

$$\beta = \frac{c}{a} = ab = a + b - 1$$

$$a + b = 1 + ab$$

$$1 + ab = a^r b^r + 1 - 1\epsilon \Rightarrow a^r b^r - ab - 1\epsilon = 0$$

$$(ab - \epsilon)(ab + 2)$$

$$ab = \epsilon$$

$$ab = -2$$

$$a^r + b^r = (a+b)^r - 1ab \Rightarrow (1+ab)^r - 1ab$$