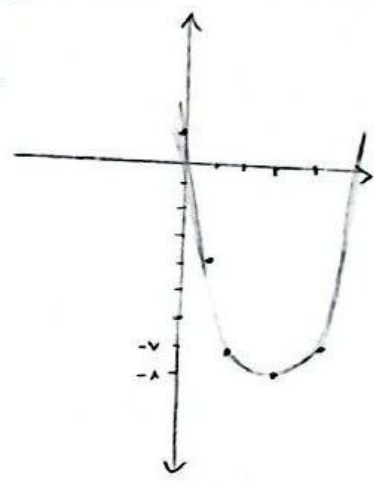


$$\text{Min: } \begin{cases} -\frac{b}{2a} = \frac{f}{r} = 1 = x_0 \\ \frac{-\Delta}{2a} = r - f + 1 = -1 = y_0 \end{cases}$$

y_0

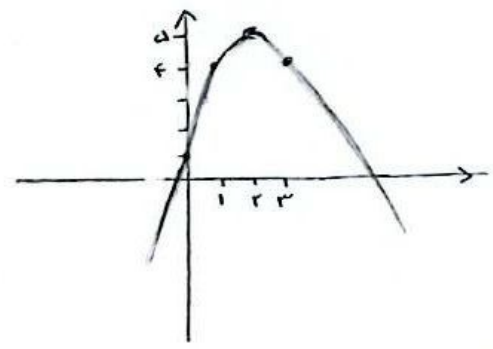
$$\text{Max: } \begin{cases} -\frac{b}{2a} = \frac{-r}{-f} = \frac{f}{r} = x_0 \\ y_0 = -\frac{r^2}{4f} + r \frac{f}{r} - a = -\frac{r^2}{4f} + \frac{1}{\lambda} - \frac{1}{\lambda} = \frac{1}{\lambda} - \frac{1}{\lambda} \end{cases}$$

$$\text{Min: } \begin{cases} x_0 = -\frac{b}{2a} = \frac{q}{r} \\ y_0 = q - 1r + 1 = -1 \end{cases}$$



$$y = x^2 - 2x + 1$$

$$\text{Max: } \begin{cases} x_0 = -\frac{b}{2a} = \frac{-f}{-r} = r \\ y_0 = -f + 1r + 1 = a \end{cases}$$



x	1	r	r
y	f	a	f

$$\left. \begin{aligned} \alpha\beta = -r \\ \alpha + \beta = 1 \end{aligned} \right\} \begin{aligned} (1-\beta)(\beta) = -r &\rightarrow -\beta^2 + \beta = -r \rightarrow \beta^2 - \beta - r = 0 \\ (\beta-r)(\beta+1) = 0 &\rightarrow \beta = r \text{ or } \beta = -1 \end{aligned}$$

$$rx^2 + Kx - 9x - r = 0 \xrightarrow{x=r} f(r) + K(r) - 9(r) - r = 0 \rightarrow fK = -1r \quad [K = -r]$$

$$\xrightarrow{x=-1} f(-1) + K(-1) - 9(-1) - r = 0 \rightarrow [K = -r]$$

$$|\sqrt{a} - \sqrt{b}| = 1 \quad \alpha + \beta = r \sqrt{\alpha\beta} = 1 \quad x^2 - rmx + m = 0 \quad S = \frac{-(-rm)}{1} = rm \quad P = \frac{m}{1} = m$$

$$r = r\sqrt{m-1} \quad \frac{a+b+c}{r} = 0$$

$$\frac{c}{a} = -\frac{1}{r} \rightarrow \sqrt{m} = -\frac{1}{r} \quad rx^2 - mx - m = 0 \quad P = \alpha\beta = \frac{-m}{r} = \left[-\frac{1}{r} \right]$$

$$\delta = \frac{1}{r} \times m \lambda \frac{\sqrt{m^2 + f - fm}}{r} = \left| \frac{r}{f} \right|$$

$$\textcircled{1} m > r \quad m^2 - r m - r^2 = 0 \quad \begin{cases} m = r \\ m = -1 \end{cases} \quad \text{if } m > r \quad \Delta r = 000$$

$$m |m - r| = |r| \quad \begin{cases} m |m - r| = r & \textcircled{1} \\ m |m - r| = -r & \textcircled{2} \end{cases}$$

$$\textcircled{2} m < r \rightarrow -m^2 + r m + r^2 = 0 \quad \begin{cases} m = -1 \\ m = r \end{cases} \quad \text{if } m > r \quad \Delta r = 000$$

$$m = r \rightarrow y = \lambda^2 + r \lambda + r \rightarrow \lambda = -\frac{r}{2}$$

$$m = -1 \rightarrow y = \lambda^2 - \lambda + r \rightarrow \lambda = -\frac{1}{2}$$

$$a > 0 \quad \left\{ \begin{array}{l} \gamma_0 = \frac{-\Delta}{r a} = \frac{-a - f(a^2)}{r a} = \frac{r}{\lambda} \Rightarrow r r a^2 - r \lambda a - r r^2 = 0 \rightarrow \lambda a^2 - \gamma_0 a - \lambda = 0 \end{array} \right.$$

$$a^2 - \gamma_0 a - \lambda = 0 \quad (a+4)(a-14) = 0 \Rightarrow \text{شبهه} \quad \begin{cases} \textcircled{1} -\frac{9}{\lambda} < a > 0 \\ \textcircled{2} \frac{14}{\lambda} < r \checkmark \quad \boxed{D = \{r\}} \end{cases}$$

$$\lambda^2 - (a+1)\lambda + a = 0 \quad \frac{\sqrt{\Delta}}{|a|} = r \quad \sqrt{a^2 + 1 + r a - f a} = r \quad |a-1| = r \quad \begin{cases} a > 1 \rightarrow a = r \\ a < 1 \rightarrow a = -1 \end{cases}$$

$$\rightarrow a > 1 \quad a = r \quad \lambda^2 - r \lambda + r = 0 \quad (\lambda-1)(\lambda-r) = 0 \checkmark \quad P_1 = \frac{r}{1}$$

$$a < 1 \quad a = -1 \quad \lambda^2 - 1 = 0 \quad \lambda = \pm 1$$

$$\lambda^2 - (r+1)\lambda + b = 0 \rightarrow \frac{\sqrt{\Delta}}{|a|} = r$$

$$\sqrt{9a^2 + 1 + 4a - fb} = r \xrightarrow{a=r} \sqrt{\lambda^2 + 1 + \lambda - fb} = r \rightarrow \dots -fb = f \quad b = rf \quad |P_1 - P_2| = |rf - r| = \boxed{r}$$

$$\textcircled{1} y = -a x^2 + a x + r \rightarrow \text{ext} \quad \begin{cases} \frac{-a}{r(-a)} = \frac{1}{r} \\ -\frac{a}{r} + \frac{a}{r} + r = \frac{a+r}{r} \end{cases}$$

$$\textcircled{2} y = r b x^2 - b x - 1 \rightarrow \text{ext} \quad \begin{cases} \frac{-(-b)}{r(r b)} = \frac{1}{r} \\ \frac{b}{r} - \frac{b}{r} - 1 = -\frac{b-1}{r} \end{cases}$$

$$\textcircled{3} x = \frac{1}{r} \quad y = \frac{a+r}{r} \rightarrow \frac{b}{r} - \frac{b}{r} - 1 = \frac{a+r}{r} \quad a = -1r$$

$$\textcircled{4} x = \frac{1}{r} \quad y = -\frac{b-1}{r}$$

$$-f = -rb - 14 \quad b = -4 \quad b - a = -4 - (-1r) \quad \boxed{4}$$

$$-\frac{a}{14} + \frac{a}{r} + r = -\frac{b-1}{r}$$

$$\frac{1r - f\lambda + r r}{14} = \frac{-rb - 14}{14}$$

$$y + r\alpha x^r + f x + \beta \Rightarrow \begin{cases} \textcircled{1} r\alpha x^r + f x + \beta = 0 \rightarrow r\alpha x^r + f x - \Delta x, \alpha(r\alpha x^r - 1) = 0 \\ \textcircled{2} \alpha \beta x + \Delta \beta = 0 \end{cases}$$

$$\Delta P(\Delta \alpha \beta + 1) = 0 \rightarrow \textcircled{1} \beta = 0 \quad \delta = \frac{-f}{r\alpha}$$

$$= 0 + \alpha \quad r\alpha x^r = \frac{f}{\alpha} \Rightarrow x$$

$$\alpha(\Delta \alpha - 1)(\Delta \alpha + 1) = 0$$

$$\textcircled{2} \alpha = 0 \quad \alpha = 0 \quad \alpha$$

$$\alpha = \frac{1}{\Delta} \quad \beta = -1 \quad \beta < \alpha \quad \text{و } \alpha < 0$$

$$\alpha = -\frac{1}{\Delta} \quad \beta = 1 \quad \checkmark$$

$$\textcircled{1} \Delta \alpha \beta + 1 = 0 \rightarrow \alpha \beta = -\frac{1}{\Delta} \Rightarrow \frac{\beta}{r\Delta \alpha} \rightarrow \beta = -\Delta \alpha$$

$$\alpha = -\frac{1}{\Delta} \quad \beta = 1 \quad -\Delta x^r + f x + 1 \Rightarrow \text{ext} \quad \left| \begin{array}{l} \frac{-f}{r(-\Delta)} = \frac{f}{\Delta} \\ -\Delta \left(\frac{r}{\Delta}\right)^r + f\left(\frac{r}{\Delta}\right) + 1 = \frac{9}{\Delta} \end{array} \right. \quad \boxed{\text{ناتمامی}} \quad \textcircled{2}$$

$$a + b = \delta \quad ab = p \quad \delta = -(-(\Delta + b^r - 1r)) = \delta^r - r p - 1r$$

$$p = a + b - 1 = \delta - 1$$

$$\delta^r - r(\delta - 1) - 1r = \delta \quad \delta^r - r\delta - 1 = \delta \quad \delta^r - r\delta - 1 = \delta \quad (\delta - \Delta)(\delta + r) = 0$$

$$\delta \begin{cases} \Delta \delta + b \quad p = \Delta - 1 = \delta \\ -r\delta + b \quad p = a + b - 1 = \delta - 1 \end{cases}$$

چون $P < 0$ پس یکی از ریشه ها
منفی می شود و چون Δ باید طبیعی باشد
پس قابل قبول است