

$$\alpha, \beta \rightarrow x^2 - 2x + 2 = 0 \Rightarrow \alpha + \beta = -2, \alpha\beta = 2 \Rightarrow p = 2, \beta = \frac{2}{\alpha}$$

$$\frac{f\alpha + p^2}{2p^2} = ? \quad \frac{f}{2} \times \frac{\alpha}{p^2} + \frac{B^2}{2} = \frac{\alpha^2}{2} + \frac{B^2}{2} = \frac{5^2 - 2ps}{2} = \frac{-125 - 2 \times 2 \times 2}{2}$$

$$= \frac{-95}{2} = -19$$

$$(2, -4) \text{ و } (-1, 5, -4)$$

دایره در سطح درجه ۲

$$x^2 - y = x^2 - 9$$

$$\Rightarrow \frac{-1 \cdot 5 + 3}{2} = -\frac{2}{2} = -1 \Rightarrow \text{خط افقی}$$

$$\frac{3}{2} \times 2 = \left(\frac{3}{2}\right) \text{ جمع شده}$$

$$x^2 - 2kx + 2 = 0 \rightarrow \text{انتقال به سمت راست} = \frac{f}{p^2} k$$

$$\left[\frac{k^2}{2}\right] = ? \quad \sqrt{4k^2 - 2} = \frac{f}{p^2} k \Rightarrow \frac{16}{9} k^2 = 4k^2 - 2 \Rightarrow 16k^2 = 36k^2 - 18 \Rightarrow 20k^2 = 18 \Rightarrow k^2 = \frac{9}{10}$$

$$\Rightarrow k^2 = 9 \Rightarrow k = 3$$

$$\left(\frac{k^2}{2}\right) = \frac{9}{2} = 4.5$$

$$x^2 = \frac{r + (-2)}{2} = \frac{-2}{2} = -1 \Rightarrow \frac{-p}{2a} = -1 \rightarrow p = 2a \quad y^2 = \frac{-\Delta}{4a} = \frac{4ac - b^2}{4a} = ca$$

$$\alpha + \beta = \frac{-b}{a} = \frac{-2a}{a} = -2 \Rightarrow (\alpha + \beta)^2 = \alpha^2 + \beta^2 + 2\alpha\beta \Rightarrow 4 = 2 + 2\alpha\beta \Rightarrow 2\alpha\beta = 2 \Rightarrow \alpha\beta = 1 = \frac{c}{a}$$

$$a\beta = \frac{1}{\alpha} = \frac{a+1}{a}$$

$$y = ax^2 + 2ax + a + 1 \Rightarrow y = a + 1 \quad a = \frac{-r}{p} \Rightarrow y = \frac{r}{p} + 1 = \left(\frac{1}{2}\right)$$

$$\begin{aligned} -a &= 2a + r \\ 3a &= -r \\ a &= \frac{-r}{3} \end{aligned}$$

$$\Rightarrow x^2 + 2x + m = 0 \xrightarrow{x=1} x^2 - 2x - m = 0 \xrightarrow{\Delta \geq 0} (b^2 - 4ac) \geq 0 \Rightarrow 4 + 4m \geq 0 \Rightarrow m \geq -1$$

$$m > -4, 2 \Rightarrow x = \frac{2}{3} \Rightarrow \left(\frac{2}{3}\right)^2 - 2\left(\frac{2}{3}\right) - m = 0 \Rightarrow \frac{4}{9} - \frac{4}{3} - m = 0 \Rightarrow \frac{4 - 12 - 9m}{9} = 0 \Rightarrow -8 - 9m = 0 \Rightarrow m = -\frac{8}{9}$$

$$m < -2, 2 \Rightarrow m > -\frac{8}{9} \text{ و } m < -2 \Rightarrow -4, 2 < m < -2, 2 \Rightarrow m = -2, 2$$

$$\Rightarrow \text{اعداد صحیح} \Rightarrow -4, -2, -1, 2 \Rightarrow \text{۴ عدد}$$

$$\min \begin{matrix} x \\ y \end{matrix} \Rightarrow m > 0 \rightarrow x = \frac{-b}{a} = \frac{-(-1r)}{r_m} = \frac{r}{m} \rightarrow y = m x^r - 1rx + \Delta m - 1 = 4$$

$$\begin{aligned} m = r &\Rightarrow x = \frac{-b}{a} = \frac{-1r}{r} = -1 \Rightarrow x = -1 \Rightarrow y = m \left(\frac{r}{m}\right)^r - 1rx + \Delta m - 1 = \dots \\ &= \frac{r^r}{m} - \frac{r}{m} + \Delta m - 1 = \frac{r^r}{m} - \frac{r}{m} + \Delta m - 1 = y_{\min} = r \rightarrow \frac{r^r}{m} + \Delta m = r \\ &\Rightarrow -r^r + \Delta m^r = r m \rightarrow \Delta m^r - r m - r^r = 0 \rightarrow \Delta = b^r - 4ac = (-r)^r - (r \cdot x \cdot r_a) \\ &= -r^r \Rightarrow m = \frac{-b \pm \sqrt{\Delta}}{a} = \frac{r \pm r\sqrt{r}}{1} \rightarrow m = \frac{r}{1} = r \quad \checkmark \quad m = r \Rightarrow x = \frac{-b}{a} = \frac{1r}{r} = 1 \end{aligned}$$

$$\begin{aligned} \alpha \beta &= a^r \rightarrow b \cdot \dots = a^r \rightarrow \frac{c}{a} = a^r \rightarrow \frac{c}{a} = a^r \Rightarrow c = a^r \Rightarrow r a - 1 = a^r \\ &\Rightarrow a^r - r a + 1 = 0 \Rightarrow (a-1)^r = 0 \Rightarrow \boxed{a=1} \\ (a-1)^r &= 0 \Rightarrow \boxed{a=1} \end{aligned}$$

$$\begin{aligned} x^r - V x^r - \Delta = 0 \quad x^r = t \quad t^r - V t - \Delta = 0 \rightarrow p = \frac{c}{a} = -\Delta < 0 \\ x^r = t_1 > 0 \Rightarrow x_1, r = \pm \sqrt{t_1} \quad \Rightarrow \quad x_1 + x_r = 0 \Rightarrow s = 0 \\ x^r = t_1 < 0 \Rightarrow x \in \mathbb{R} \quad \Rightarrow \quad p = x_1 \cdot x_r = \sqrt{t_1} \cdot (-\sqrt{t_1}) = -t_1 \Rightarrow p^r = t_1^r \\ t^r - V t - \Delta = 0 \rightarrow t = \frac{V \pm \sqrt{V^2 + 4\Delta}}{2} = \frac{V \pm \sqrt{4r}}{2} \rightarrow t_1 = \frac{-V + \sqrt{4r}}{2} \rightarrow p^r \\ p^r = \frac{\Delta r + V \sqrt{4r}}{2} \\ \rightarrow r p^r - r p s + r s = \Delta r + V \sqrt{4r} = \boxed{\Delta r + V \sqrt{4r}} \end{aligned}$$

$$\begin{aligned} y &= k x^r - f x - g \rightarrow x = \frac{-b}{a} = \frac{-(-f)}{rk} = \frac{f}{rk} = \frac{r}{k} \\ &\rightarrow y = k x^r - f x - g \\ &\rightarrow x = \frac{r}{k} \quad y = k \left(\frac{r}{k}\right)^r - f x \frac{r}{k} - g = \frac{f}{k} - \frac{\Lambda}{k} - g \\ &= \frac{-f}{k} - g \end{aligned}$$

$$y = \frac{x = \frac{r}{k}}{y = \frac{-f}{k} - g} = \frac{f}{k} - g = -f \left(\frac{r}{k}\right) - f \rightarrow \frac{-f}{k} - g = \frac{-\Lambda}{k} - f$$

$$\begin{aligned} \rightarrow \frac{-f}{k} + \frac{\Lambda}{k} &= -f + g \rightarrow \frac{f}{k} = r \rightarrow rk = f \Rightarrow k = r \\ \rightarrow g &= \frac{f}{k} - g \xrightarrow{k=r} y = \frac{-f}{r} - g = -r - g = -\Lambda \rightarrow y_s = \boxed{-\Lambda} \end{aligned}$$

$$\begin{aligned} -m x^r + m x + 1 &= -m - x \rightarrow -m x^r + (m+1)x + (m+1) = 0 \Rightarrow m x^r - (m+1)x - (m+1) = 0 \quad | \cdot (-1) \\ A < 0 \quad b^r - 4ac < 0 &\Rightarrow (m+1)^r - 4((m+1)(-m)) < 0 \Rightarrow m^r + r m + 1 - f(-m^r - m) < 0 \\ &\Rightarrow m^r + r m + 1 + f \Rightarrow (m+1)^r + f m(m+1) < 0 \quad (m+1)(m+1 + f m) < 0 \\ &\Rightarrow \frac{(m+1)(b m + 1)}{-1 \quad -\frac{1}{f}} < 0 \rightarrow -1 < m < -\frac{1}{f} \quad \boxed{-1 < m < -\frac{1}{f}} \end{aligned}$$