

$$x_5 = r = \frac{-b}{2a} = \frac{-1}{2 \cdot 1}$$

$$2a - r = -1$$

$$a = \frac{1}{r} \Rightarrow y = \frac{-x^2}{r} + x + r$$

$$\Delta = 1 + 4 = 5$$

$$x_1 = \frac{\sqrt{5} - 1}{-1} = 1 - \sqrt{5} \quad (x_1 < 0)$$

$$x_2 = \frac{-\sqrt{5} - 1}{-1} = 1 + \sqrt{5} \quad (x_2 > 0)$$

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$$a < 0$$

$$\Delta > 0$$

$$m < 0$$

$$2a - 4m^2 > 0$$

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$$m^2 < \frac{2a}{4}$$

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

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$$\textcircled{1} \cap \textcircled{2} = \left(-\frac{a}{r}, 0\right)$$

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$$S = \frac{r - \sqrt{\Delta}}{r} + \frac{r + \sqrt{\Delta}}{r} = 2$$

$$P = \frac{r - \sqrt{\Delta}}{r} \times \frac{r + \sqrt{\Delta}}{r} = 1$$

$$\Rightarrow y = x^2 - Sx + P \Rightarrow y = x^2 - 2x + 1$$

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$$x^2 - 4x + \frac{m}{r} + 1 = 0$$

$$2\alpha^2 + \beta^2 = 12$$

$$m - 1 - \sqrt{\frac{m-r}{r}} + m + 1 = 0$$

$$S = 4$$

$$2\alpha^2 + \alpha^2 + \beta^2 = 12$$

$$m = \sqrt{\frac{m-r}{r}}$$

$$P = \frac{m+r}{r}$$

$$2\alpha^2 + 5 - 2P = 12$$

$$m^2 = \frac{m-r}{r}$$

$$2\alpha^2 + 16 - 2\left(\frac{m+r}{r}\right) = 12$$

$$m^2 - 1 - m + 1 = 0$$

$$(m-1)^2 = 0 \Rightarrow m = 1$$

$$2\alpha^2 = m - 2$$

$$\alpha = \sqrt{\frac{m-2}{2}}$$

$$\Rightarrow \left(\sqrt{\frac{m-r}{r}}\right)^2 - 1 - \sqrt{\frac{m-r}{r}} + m + 1 = 0 \Rightarrow \text{در مابین}$$

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$$\frac{-b}{2a} = r$$

$$14\alpha^2 = -14a$$

$$\alpha^2 = -a$$

$$b = -4a$$

$$\alpha = -1 \quad \left. \begin{array}{l} \text{عقود} \\ \text{(مربعات دایمی منبسط)} \end{array} \right\} \Rightarrow y = -x^2 + 4x + 5$$

$$4a\alpha - b^2 = 9$$

$$b = -4a = 4$$

$$x^2 - 4x - 5 = 0$$

$$(x-5)(x+1) = 0$$

$$x = 5 / -1 \quad \frac{-1}{2} \pm \frac{-1}{2} \Rightarrow (-1, 5)$$

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