

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

$$14 = -b \rightarrow b = -14$$

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الف) $x^2 = 4$

$$f(x) = x^2 + 2x + 3$$

$$\Delta = 4 - 4(1)(3) = \Delta < 0$$

نمی توان

ب) $x^2 = 5$

$$f(x) = x^2 - 2x - 15 = 0$$

$$\Delta = 4 - 4(1)(-15) = 64$$

$$\Delta = 8 \rightarrow x = \frac{2 \pm \sqrt{64}}{2} = \frac{2 \pm 8}{2}$$

$$x = \frac{2+8}{2} = 5 \quad x = \frac{2-8}{2} = -3$$

$$x^2 = 5 \rightarrow x = \pm \sqrt{5}$$

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$$\alpha = 1 + \beta \rightarrow m = ? \quad \beta = ? \quad \alpha = ?$$

$$x^2 - 14x + m = 0$$

$$\frac{m}{4} = 3 \rightarrow m = 12$$

$$\begin{cases} \alpha - \beta = 1 \\ \alpha + \beta = 4 \end{cases}$$

$$2\alpha = 5$$

$$\alpha = 2.5 \rightarrow \beta = 1.5$$

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$$2\alpha - \beta = 4 \quad m = ?$$

$$x^2 - 4x + m - 1 = 0$$

$$\alpha \times \beta = m - 1 = 0$$

$$m = 1$$

$$\begin{cases} 2\alpha - \beta = 4 \\ \alpha + \beta = 1 \end{cases}$$

$$3\alpha = 5$$

$$\alpha = \frac{5}{3} \quad \beta = -\frac{1}{3}$$

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$$\alpha, \frac{1}{\alpha} \quad \alpha \times \frac{1}{\alpha} = \frac{m^2 - r}{-m} = 1 \rightarrow m^2 - r = -m$$

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

$$\Delta = 1 - 4(-r) = 4$$

$$m_1 = \frac{-1 + 2}{2} = \frac{1}{2}$$

$$m_2 = \frac{-1 - 2}{2} = -\frac{3}{2}$$

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$$M = ? \quad \alpha \beta^r = F$$

$$x^r - Mx + r = 0$$

$$\begin{cases} \alpha \times \beta^r = F \\ \alpha + \beta = r \end{cases} \rightarrow \underline{\beta = \frac{F}{r}} \quad \underline{\alpha = \frac{4}{F}}$$

$$M = \alpha + \beta = \frac{F}{r} + \frac{1}{F} = \left(\frac{F^2}{r} \right)$$

$$\alpha = r\beta \quad \alpha \times \beta = r\beta^r$$

$$\alpha - r\beta = 0$$

$$x^r - rx + M = 0$$

$$\alpha + \beta = r$$

$$(-) \times \alpha + r\beta = 0$$

$$r\beta = r$$

$$\underline{\beta = 1} \quad \underline{\alpha = r}$$

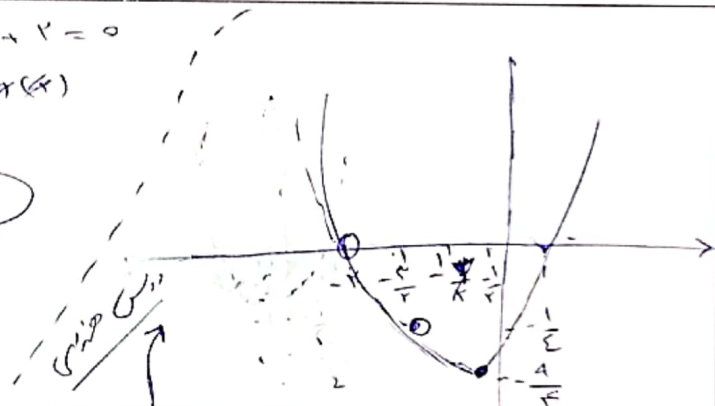
$$M = \alpha + \beta = \underline{r}$$

$$\alpha^r + \frac{1}{\alpha^r} = ?$$

$$x^r - rx + r = 0$$

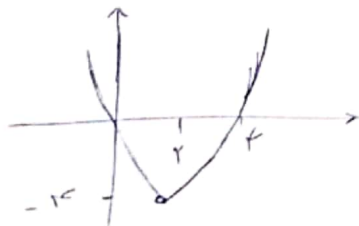
$$F(x) = x^r - rx + r$$

$$x^r - \left(\frac{r}{\alpha}\right)^r = 0 \quad \alpha = r \quad \alpha \beta = r \quad \alpha = r$$



$$x^r + 1 - rx = rx + x$$

$$x^r - rx = 0$$



$$x^r + rx - |x+r| = 0$$

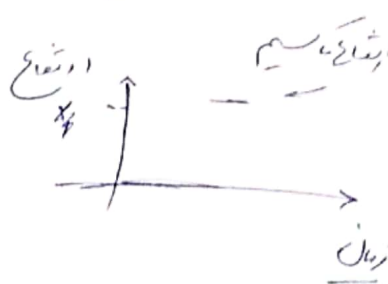
$$|x+r| = -(x+r) \quad x, r < 0$$

$$x^r - rx + r = 0 \quad x = -1 \quad \text{و } x = -r$$

$$|x+r| = x+r \quad x, r > 0$$

$$x^r + x - r = 0 \quad x = -r \quad \text{و } x = 1$$

$$h(d) = -1.1^r + d \cdot d \rightarrow \Delta = 0 \quad r(x) = \frac{1}{x}$$



$$-\Delta = \frac{1}{x} + \Delta \cdot \left(\frac{0}{x}\right) = -\frac{1}{x} + \frac{1}{x} = 0$$

$$\Delta = r \cdot d = F(-1) \cdot (-1) \quad \sqrt{\Delta} = d$$

$$\Delta = r \cdot d = F(-1) \cdot (-1) \quad \sqrt{\Delta} = d$$