

$$y = -x^2 + bx + c \quad \max z = v$$

$$b^2 - 4c = 0 \Rightarrow b^2 = 4c \Rightarrow b = 2\sqrt{c} \Rightarrow c = \frac{b^2}{4}$$

$$y = -x^2 + 2\sqrt{c}x + c \Rightarrow -x^2 + 2bx + c \Rightarrow (x+b) \Rightarrow c = f(x) \text{ (مینه)}$$

$$v = \frac{(f-a)^2}{4} - 2(f-a) - 1 \Rightarrow b^2 - 2b - 1 \Rightarrow (b-1)(b+3) \Rightarrow \begin{cases} f-a = \Delta \Rightarrow -x^2 - 1 \\ -(x^2+1) = 0 \end{cases}$$

$$f(x) = -x^2 - 1 \Rightarrow -x^2 - 1 = 0 \Rightarrow x^2 = -1 \Rightarrow \text{no real solution}$$

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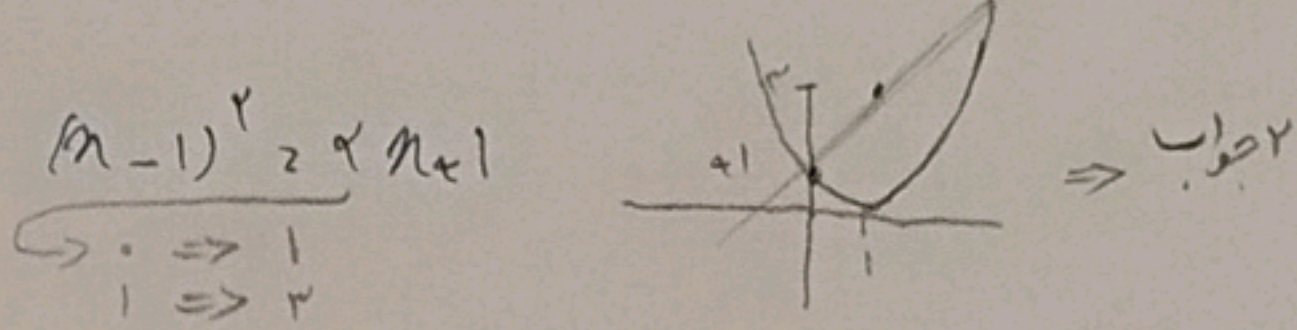
$$-x^2 - 1 = 0 \Rightarrow x^2 = -1 \Rightarrow \text{no real solution}$$

$$x^2 - mx + c = 0 \quad m^2 - 4c > 0 \Rightarrow m^2 > 4c \Rightarrow m > 2\sqrt{c} \quad m < -2\sqrt{c}$$

$$x^2 - mx + c = 0 \Rightarrow x = \frac{m \pm \sqrt{m^2 - 4c}}{2}$$

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$$h(t) = -1.6t^2 + \omega \cdot t \Rightarrow \dots \Rightarrow 1.6t(-t + \omega) \Rightarrow \dots \Rightarrow \omega = \frac{v}{t}$$



$$(n-1)^2 \leq n+1 \Rightarrow n^2 - 2n + 1 \leq n+1 \Rightarrow n^2 - 3n \leq 0 \Rightarrow n(n-3) \leq 0 \Rightarrow n \in [0, 3]$$