

نام و نام خانوادگی آریستر پاسخنامه تشریحی تکلیف شماره ۱۳۰۰ کلاس یازدهم نام و نام خانوادگی

$$y = (a-1)x^2 + x + 3$$

$$n=2 \rightarrow \text{دو ریشه} \quad x = -\frac{b}{2a} \quad \frac{-1}{2(a-1)} = 2$$

$$\downarrow -\frac{1}{2} = a-1 \rightarrow a = \frac{3}{2}$$

(۲)

$$a = \frac{3}{2} \rightarrow -\frac{1}{2}x^2 + x + 3 = 0 \rightarrow x^2 - 2x - 6 = 0$$

$$(x-6)(x+2) = 0 \rightarrow \begin{cases} x=6 \checkmark \\ x=-2 \checkmark \end{cases}$$

$$f(x) = mx^2 - \omega x + m$$

$$\begin{array}{c|cc} x & x_1 & x_2 \\ f(x) & - & + \end{array} \rightarrow m < 0 \quad (2)$$

$$\Delta > 0 \rightarrow 4\omega^2 - 4m^2 > 0$$

$$\frac{\omega^2}{m^2} > 1 \rightarrow -\frac{\omega}{m} < m < \frac{\omega}{m} \quad (1)$$

$$1 \cap 2 \rightarrow -\frac{\omega}{m} < m < 0 \quad \checkmark$$

(۲)

$$ax^2 + bx + c = 0$$

$$\frac{3-\sqrt{5}}{9}, \frac{3+\sqrt{5}}{9}$$

$$s = 2$$

$$p = \frac{2}{9}$$

$$\begin{cases} x^2 - 4x + p = 0 \\ x^2 - 2x + \frac{2}{9} = 0 \end{cases}$$

$$9x^2 - 18x + 2 = 0 \quad \checkmark$$

(۲)

$$\alpha x^2 + \beta x + \gamma = 0$$

$$s = -\frac{b}{a} = \frac{4}{3}$$

$$p = \frac{m+1}{3}$$

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

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

$$2(s^2 - 2p) + (\alpha - \beta)(\frac{4}{3}) = 12 \rightarrow 2(14 - \frac{m+1}{3}) + \frac{4}{3} = 12$$

$$28 - \frac{2m+2}{3} + \frac{4}{3} = 12$$

$$28 - \frac{2m+2}{3} = 12 - \frac{4}{3} = \frac{32}{3}$$

$$28 - \frac{2m+2}{3} = \frac{32}{3} \rightarrow 28 - \frac{2m+2}{3} = \frac{32}{3}$$

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(۲)

$$y = a(x-2)^2 + 9$$

$$x=0 \rightarrow y=9$$

$$4a+9=9 \rightarrow a=-1$$

$$y = -(x-2)^2 + 9 = -x^2 + 4x - 4 + 9 = -x^2 + 4x + 5$$

$$-x^2 + 4x + 5 > 0$$

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

$$(x-5)(x+1) < 0 \rightarrow -1 < x < 5 \quad \checkmark$$

$$\frac{-1 \pm \sqrt{16+20}}{2} = \frac{-1 \pm 6}{2}$$

$$x = \frac{5}{2} \text{ or } x = -\frac{3}{2}$$

(۲)

$$\alpha n^Y - V n + q B_2 \xrightarrow{n=B} \alpha B^Y - \frac{V B + q B_2}{Y B} \rightarrow \alpha B^Y_2 - Y B \rightarrow \frac{\alpha B_2 - Y}{1} \rightarrow \alpha \angle$$

$$x^2 + mx - ym = 0 \rightarrow s_2 = m_2 \alpha + \beta$$

$$\downarrow \quad \downarrow$$

$$\alpha \quad \beta$$

$$\alpha^2 - m\beta = \Delta \rightarrow -m\alpha - m\beta + ym = \Delta$$

$$\alpha^2 - m\alpha + ym$$

$$\downarrow$$

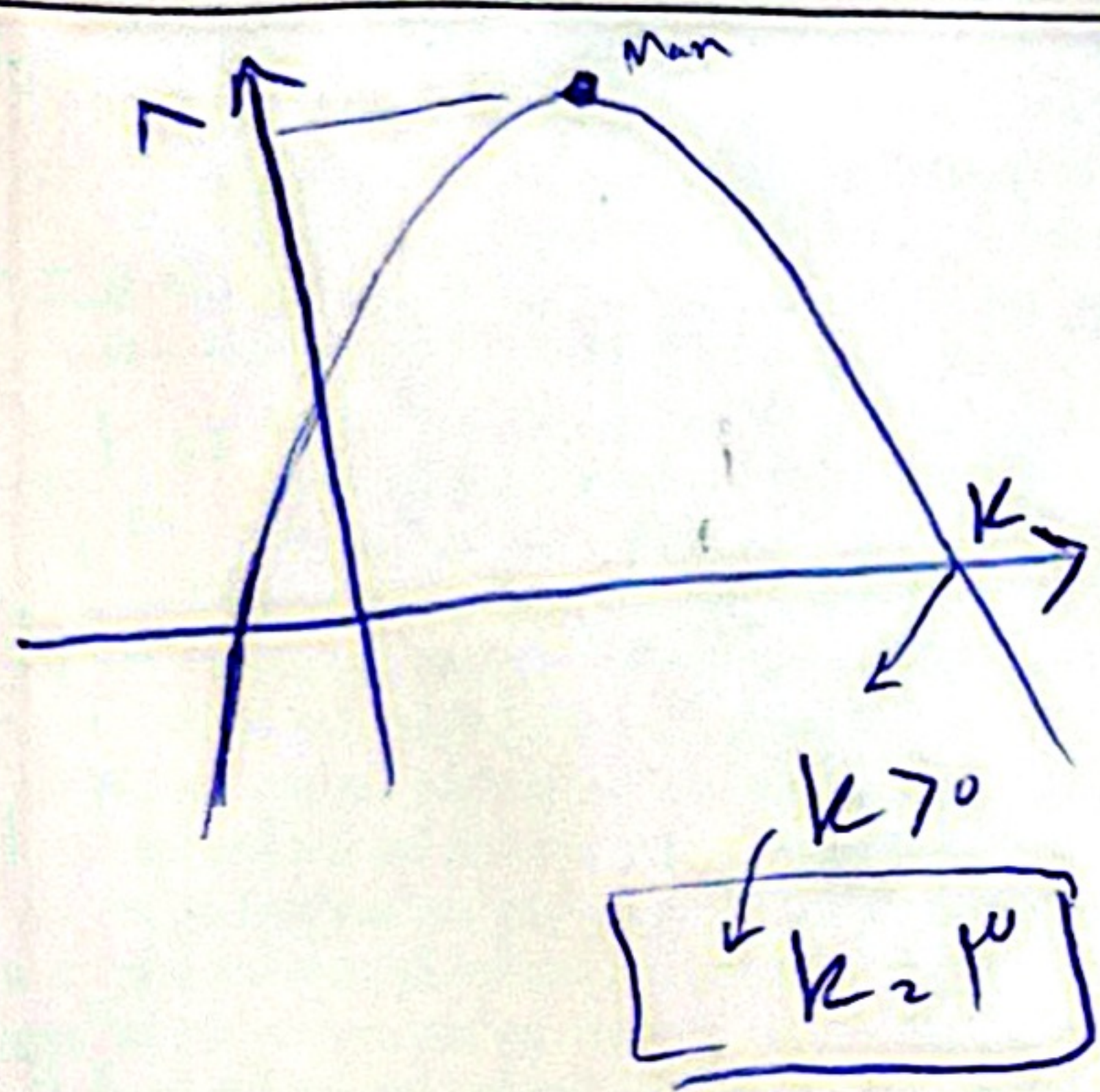
$$m^2 + ym - \Delta = 0$$

$$\downarrow$$

$$(m - y)(m + y) = 0 \rightarrow m = y \rightarrow x^2 + yx - y^2 = 0 \rightarrow \Delta > 0 \rightarrow \alpha + \beta = -y$$

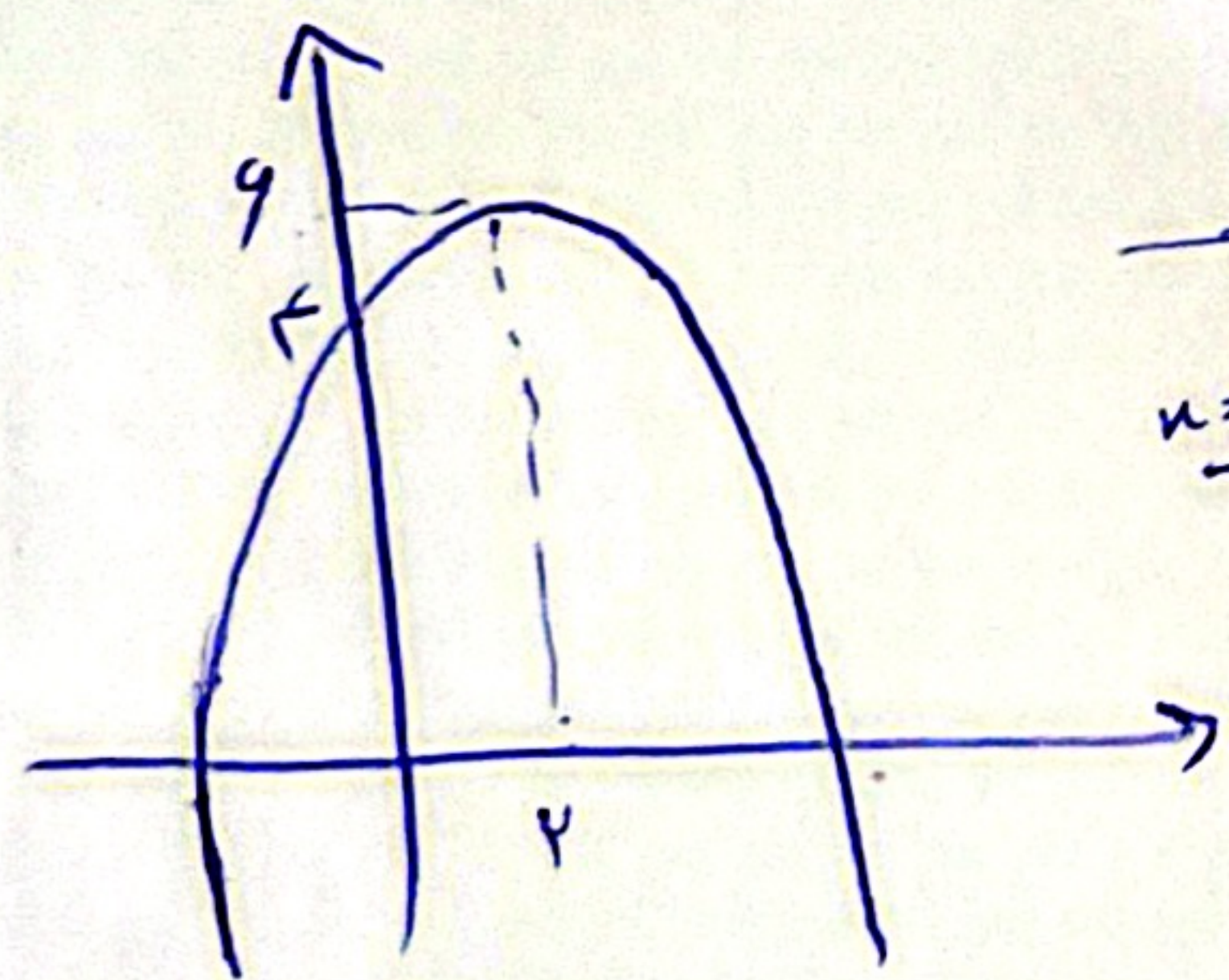
$$\downarrow$$

$$m = -y \rightarrow x^2 - yx + y^2 = 0 \rightarrow \Delta < 0$$



$$f(n) = mn^r + cn + \frac{m}{r} + V \xrightarrow{m \gg n} m \ll$$

[illegible]



$$\rightarrow y_2 \propto (x-r)^4 + 4$$

$$u_{20} \rightarrow f_1 + 4_2 f_2$$

$$a_2 = \frac{1}{n^2 - 2n}$$

$$2 - \frac{1}{y} (u - y)' + y = 0$$

$$-\frac{1}{\gamma}x^{\gamma} + \gamma x - \cancel{\gamma}x^{\gamma_2}$$

$$\begin{array}{ccc} n^Y - (n - \Lambda_2) & & 52\text{f} \\ \swarrow & & \searrow \\ \alpha & \beta & \rho_3 - \Lambda \end{array}$$

$$\rightarrow \frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = -\frac{1}{\gamma} \quad \checkmark$$

$$n^y - (c_u + c) n + p u^y + c a + v = 0$$

$$\xrightarrow{y_2} \left(-Na - 1 + \cancel{\mu_2} + \cancel{\mu_2} + \mu_2 \right)$$

$$\downarrow \quad \mu_a^* - \gamma_a - 1 \rightarrow \downarrow \quad a^* - \mu_a - \gamma_a$$

$$(a-1)(a+1) \rightarrow \frac{a_2}{a_2 - \frac{1}{\mu}}$$

$$\alpha_2 | \rightarrow n^r - \Lambda n + 1 \nu_2.$$

$\rightarrow n^2 - 11n + 10$
 $\rightarrow (n-4)(n-2)$ $\rightarrow n=2$ $\rightarrow n=4$ ✓

$$a_2 = \frac{1}{\mu} \rightarrow x^2 - \frac{1}{\mu}x + \frac{c}{\mu} \rightarrow x^2 - \lambda x + \frac{c}{\mu}$$

$$x = \frac{4}{\mu} = 24$$

$$u_2 = \frac{2}{3} = \frac{2}{3} \quad | \quad \checkmark$$