

نام و نام خانوادگی: ... فرهاد فرزند ... پاسخنامه تشریحی تکلیف شماره ۱۳۰ کلاس: ... (از ده بهر)

$$y_2(a-1)a^r + a + r$$

$$a_2 = \frac{b_2}{r a} \quad r_2 = \frac{1}{r(a-1)} \quad \Rightarrow a - r_2 - 1 \Rightarrow a_2 = \boxed{\frac{r}{4}}$$

$$y_2 - \frac{1}{r}a^r + a + r \geq 0 \Rightarrow -\frac{1}{r}a^r + a + r \geq 0 \Rightarrow a^r - fa - 12 \geq 0$$

$$\rightarrow a = \frac{f \pm 1}{r} \quad \begin{matrix} a_1 = 4 \\ a_2 = 2 \end{matrix} \quad \boxed{a_2 = 2} \quad \checkmark$$

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$$f(m) = ma^r - \Delta a + m$$

$$\Delta = (-\Delta)^r - fm^r \geq 2\delta - fm^r \Delta > 0 \Rightarrow 2\delta - fm^r > 0 \Rightarrow fm^r < 2\delta \Rightarrow |m| < \frac{\delta}{r}$$

$$\rightarrow -\frac{\delta}{r} < m < 0 \rightarrow \boxed{-\frac{\delta}{r} < m < 0} \quad \checkmark$$

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$$a_1 = \frac{r + \sqrt{5}}{r}, \quad a_2 = \frac{r - \sqrt{5}}{r} \rightarrow a^r - (a_1 + a_2)a + a_1 a_2 \geq 0$$

$$\rightarrow a_1 + a_2 = 2, \quad a_1 a_2 = \frac{f}{q} \rightarrow a^r - 2a + \frac{f}{q} \geq 0$$

$$\times q \rightarrow qa^r - 18a + f \geq 0 \quad \checkmark$$

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$$2a^r - 18a + m + r \geq 0$$

$$ra^r + B^r \geq 12 \leadsto ra^r(f - \alpha) \geq 12 \rightarrow fa^r - 18a + f \geq 0 \xrightarrow{\Delta} \alpha \geq 1$$

$$a + B = \frac{b}{a} = \frac{1}{r} \geq f \rightarrow B \geq f - \alpha \quad \begin{matrix} \rightarrow B \geq f - \alpha \geq B \geq r \\ \rightarrow \alpha < B \end{matrix}$$

$$aB \geq \frac{c}{a} = \frac{m+r}{r} \leadsto aB \geq 1 \times r \geq r \geq \frac{m+r}{r} \Rightarrow \boxed{m \geq f} \quad \checkmark$$

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$$\sigma_1 \rightarrow (r, q) \rightarrow (h, a)$$

$$y = a(a-h)^r + a \rightarrow y = a(a-r)^r + a \leadsto -(a-r)^r + a$$

$$\rightarrow a - r \geq \pm r \quad \begin{matrix} a_1 = -1 \\ a_2 = 5 \end{matrix}$$

$$\rightarrow a(a-r)^r + a \geq 0 \rightarrow 9a + 9 \geq 0 \Rightarrow a \geq -1$$

$$\leadsto -1 < a < 5 \quad \text{و} \quad (-1, 5) \quad \checkmark$$

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$$\alpha A^r - VA + 4B = 0$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{1}{-r} + \frac{r}{r} = \boxed{\frac{V}{\epsilon}} \checkmark$$

$$a_1 + a_r = \frac{b}{a} = \frac{V}{a}$$

$$a_1 a_r = \frac{c}{a} \sim \frac{4B}{a} \rightarrow \alpha B = \frac{4B}{\alpha} \rightarrow \alpha^r = a \rightarrow a = \pm r$$

$$\begin{aligned} a &= -r \\ B &= \frac{r}{\mu} \end{aligned}$$

$$A^r + MA - rM = 0$$

$$a + B = -M \leftarrow -\frac{r}{f} \checkmark$$

$$M = \frac{-r \pm \sqrt{r^2 + 4}}{r} \leftarrow \begin{aligned} m_1 &= r \\ m_2 &= -f \end{aligned} \checkmark$$

$$A^r - MB = \Lambda$$

$$a + B = -M \rightarrow M = -(a + B) \xrightarrow{\text{sub}} A^r - (-(a + B))B = \Lambda$$

$$\rightarrow A^r + B(a + B) = \Lambda \rightarrow A^r + aB + B^r = \Lambda$$

$$\alpha B = rM$$

$$\rightarrow (a + B)^r = A^r + r\alpha B + B^r \rightarrow (a + B)^r - aB = \Lambda \rightarrow M^r + rM - \Lambda = 0$$

$$f(a) = mA^r + fA + \frac{M}{r} + V$$

$$a_1 a_r = \frac{b}{ra} \rightarrow \frac{f}{m} = \frac{-r}{m} = k \rightarrow F(k) = \Lambda \rightarrow F\left(-\frac{r}{m}\right) = m\left(\frac{f}{m^r}\right) + f\left(-\frac{r}{m}\right) + \frac{m}{r} + V$$

$$\rightarrow \frac{f}{m} - \frac{\Lambda}{m} + \frac{m}{r} + V \rightarrow F\left(-\frac{r}{m}\right) = -\frac{f}{m} + \frac{m}{r} + V = \Lambda \rightarrow -\frac{f}{m} + \frac{m}{r} = \Lambda$$

$$\rightarrow -\Lambda + m^r - rM \rightarrow m^r - rM - \Lambda = 0$$

$$M = \frac{r \pm \sqrt{r^2 + 4}}{r} \xrightarrow{\text{sub}} f(a) = -rA^r + fA + 4 \rightarrow a_1 = r$$

$$f(a) = a(a - r)^r + 4 \xrightarrow{\text{sub}} f = a(0 - r)^r + 4 = f \Rightarrow fa + 4 \rightarrow a = -\frac{1}{r}$$

$$f(a) = -\frac{1}{r}(a - r)^r + 4 \xrightarrow{\text{sub}} -\frac{1}{r}(a - r)^r + 4 = 0 \rightarrow (a - r)^r = 4r \leftarrow \begin{aligned} a_1 &= r + \sqrt[r]{4r} \\ a_r &= r - \sqrt[r]{4r} \end{aligned}$$

$$\rightarrow \frac{1}{a_1} + \frac{1}{a_r} = \frac{a_1 + a_r}{a_1 a_r} = \frac{r + r\sqrt[r]{4r} + r - r\sqrt[r]{4r}}{f - 1r} = \frac{f}{-1r} = \boxed{-\frac{1}{r}} \checkmark$$

$$A^r - (fa + f)A + (ra^r + 9a + r) = 0$$

$$\rightarrow a_1 + a_r = fa + f \xrightarrow{\text{sub}} a_1 r + a_r = fa + f \rightarrow a_r = fa + r$$

$$\rightarrow a_1 a_r = ra^r + 9a + r \quad r(fa + r) = ra^r + 9a + r \Rightarrow$$

$$\rightarrow \Lambda a + f = ra^r + 9a + r \rightarrow ra^r - ra - 1 = 0 \rightarrow \frac{r \pm \sqrt{r^2 + 4}}{r}$$

$$\begin{aligned} a_1 &= 1 \Rightarrow a_r = 4 \\ a_r &= -\frac{1}{r} \Rightarrow a_1 = \frac{r}{\mu} \end{aligned} \rightarrow \boxed{4, \frac{r}{\mu}} \checkmark$$