

سری همی زاده / دهم A

تکلیف شماره ۱۷

باقی به جملات هوشمندانه در دسته n ام آخذین عضو دسته n^2 بنابراین

آخذین عضو دسته هشتم 8^2 و بنابراین اولین جمله دسته نهم $8^2 + 1 = 65$ است پس داریم:

$$1, 4, 9, 16, 25, 36, 49, 64, \dots \rightarrow n^2 + n - 1 = a_n$$

$$\frac{1+64}{2} = 32.5$$

$$a_1 = 1, a_2 = 4, a_3 = 9, a_4 = 16, a_5 = 25, a_6 = 36, a_7 = 49, a_8 = 64$$

$$c = -1, b = 1 + 0 - 1 = 0$$

۱: $\{1, 2, 3\}, \{4, 5, 6, 7, 8, \dots, 12\}, \{13, \dots\}$

$$\frac{1+12}{2} = 6.5$$

$$\frac{1+13}{2} = 7$$

$$\frac{1+14}{2} = 7.5$$

$$\frac{1+15}{2} = 8$$

$$\frac{1+16}{2} = 8.5$$

$$\frac{1+17}{2} = 9$$

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$$a_n = 1/r \rightarrow a_1 = -\frac{1}{r} + (-1) = -\frac{1}{r} - 1$$

$$a_n = \frac{1}{V_n} \rightarrow a_1 = \frac{1}{V_1} - 1 = -\frac{1}{V_1}$$

$$(-\frac{1}{r} \times d^r) + db + c = 1/r$$

$$(-\frac{1}{r} \times V^r) + Vb + c = 1/V$$

$$\begin{cases} db + c = 1/r \\ Vb + c = 1/V \end{cases} \rightarrow \begin{cases} rb = 1 \\ b+r \end{cases} \rightarrow c = -1$$

$$\frac{a_n}{a} = \frac{(-\frac{1}{r} \times d^r) + 1/r - 1}{r, 1/r}$$

$$\frac{1/r}{r, 1/r} = \boxed{2}$$

$$a_n = pn + b \rightarrow 10n + b = 0 \rightarrow b = -10p$$

$$a_n = pn - 10p = p(n-10) \rightarrow a_1 = p(1-10) = -9p$$

$$a_v = a(v-10) = -9p$$

$$x_p = -9p = a + rd = -9p$$

$$x_n = -9p = a + vd$$

$$d = \frac{a_p}{r} = \frac{-9p + 9p}{1-p}$$

$$\left\{ \begin{array}{l} \frac{a_n}{d} = \frac{p(10-10)}{\frac{-9p}{r}} = \boxed{r} \end{array} \right.$$

$$y_{ap} = \Delta a_p \cdot a + r a_p \cdot a$$

$$a \Delta a + b \Delta d + r a + r a d = y_{ap} + y_d + r a d$$

$$r a + r a d - y_d = 0 \xrightarrow{\div d^r} r(\frac{a}{d})^r + \frac{a}{d} - y = 0 \xrightarrow{x = \frac{a}{d}}$$

$$r x^r + x - y = 0 \Rightarrow x = \frac{-1 \pm \sqrt{1+4y}}{r} = \frac{r}{r}, -r = \frac{a}{d}$$

$$a = -rd \Rightarrow \frac{a+rd}{d} = \frac{d}{d} = \boxed{1}$$

$$r a = rd \Rightarrow a = \frac{r}{r} d \rightarrow \frac{\frac{r}{r} d + rd}{d} = \boxed{\frac{q}{r}}$$

$$\rightarrow b_1(a+d), c_2(a+d)$$

$$\rightarrow \frac{a+c}{r} = b \rightarrow a+c = r \cdot b \quad : \text{vor}$$

$$b \times \frac{c}{r} = \left(\frac{a}{r}\right)^r \rightarrow \frac{bc}{r} = \frac{a^r}{r} \rightarrow bc = a^r$$

$$b \rightarrow a^r = bc = (a+d)(a+d) = a^r + r \cdot a \cdot d + d^r$$

$$r \cdot a \cdot d + d^r = 0 \rightarrow d(r \cdot a + d) = 0 \quad r \cdot d = 0$$

$$\downarrow \text{denn } d \neq 0 \Rightarrow \frac{a}{r} = b \Rightarrow q = \frac{a}{r \cdot b} = \frac{a}{r(a+d)} = \frac{a}{r(-\frac{a}{r})} = \boxed{-1}$$

$$r \cdot q = r(-1) = \boxed{-r}$$

$$-ac = b^r \rightarrow ra - r \cdot b = d = c - ra$$

: 1a

$$b = aq, c = aq^r$$

$$ra - r(aq) = aq^r - ra$$

$$ra - r \cdot aq = aq^r \rightarrow q^r + r \cdot q - r = 0$$

$$\frac{aq^r}{aq} = q^{r-1} = 1, (-r) \cdot (-4r) \quad (q-1)(q+r) = 0$$

$$q = 1, q = -r$$

$$\frac{a^r \cdot aq}{aq} = \frac{a^r}{q} = ?$$

$$\frac{aq^r + aq}{a^r} = r$$

: 9a

$$\sim q = a \rightarrow \frac{a}{q} = \boxed{1}$$

$$\sim q = -ra \Rightarrow \frac{a}{q} = \boxed{-\frac{1}{r}}$$

$$\rightarrow \frac{q^r + aq}{a^r} = r$$

$$q^r + aq = r \cdot a^r$$

$$q^r + aq - r \cdot a^r = 0$$

$$q = \frac{-a \pm \sqrt{a^r + 4a^r}}{2} = a, -ra$$

✓

Lunaphil

$$\alpha p \sim \sqrt{q}^r$$

$$\Rightarrow \alpha \sim \sqrt{q}^r$$

$$\log$$

$$\alpha q^r \sim \sqrt{q}^r$$

$$\rightarrow \alpha q^r \sim \alpha q^r$$

$$\rightarrow \alpha q \sim \frac{1}{\alpha}$$

$$\alpha x \left(\frac{1}{\alpha} \right)^r$$

$$\sim \sqrt{q}^r$$

$$\Rightarrow \left(\frac{1}{\alpha} \right)^r \sim \sqrt{q}^r$$

$$\Rightarrow \alpha \sim \frac{1}{\sqrt{q}}$$

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②

$$\alpha q^r \sim \sqrt{q}^r$$

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