

کلاس دوم، A

حلنامہ

پاسخانہ تکلیف نمبر ۱۲:

$$t_n = 5, 9, 13, 17, \dots \quad d = +4, t_1 = 5 \Rightarrow t_n = f(n+1) \quad \text{الف (۱)}$$

$\xrightarrow{+4} \quad \xrightarrow{+4} \quad \xrightarrow{+4}$

$$t_{10} = f(10) + 1 = f1 \quad \text{ب}$$

$$t_n = 9, 10, 14, 18, \dots \quad d = 4, t_1 = 9 \Rightarrow t_n = f(n) + 2 \Rightarrow t_{10} = f(10) + 2 = 42 \quad \text{الف (۲)}$$

$\xrightarrow{+4} \quad \xrightarrow{+4} \quad \xrightarrow{+4}$

بقیہ آخر

$$S_n = \frac{n}{2} (t_1 + t_n) \rightarrow S_{10} = \frac{10}{2} (9 + f1) = f50$$

$$(t_1, \dots, t_f) / (t_1, \dots, t_n) / (t_1, \dots, t_{12}) \Rightarrow \text{قسمت} = (t_{19}, \dots, t_{32}) \quad \text{ب (۱)}$$

$\xrightarrow{\text{قسمت اول}} \quad \xrightarrow{\text{قسمت دوم}} \quad \xrightarrow{\text{قسمت سوم}}$

$$t_{19} + t_{20} + t_{21} + t_{22} \Rightarrow t_{19} = f(19) + 2 = 111 \quad t_{20} = f(20) + 2 = 114 \quad \text{روشن (۱)}$$

$$t_{21} = f(21) + 2 = 118 \quad t_{22} = f(22) + 2 = 122$$

$$111 + 114 + 118 + 122 = f95 \quad \left\{ \begin{array}{l} 3 \times f(20) + t_{22} = (399) + (122) = f99 \end{array} \right. \quad \text{روشن (۲)}$$

$$d = a_r - a_1 = r - (1 + \sqrt{r}) = 1 - \sqrt{r} \rightarrow a_n = a_1 + (n-1)d \quad -r$$

$$a_{r\omega} = a_1 + (r\omega - 1)d \Rightarrow a_{r\omega} = 1 + \sqrt{r} + (r\omega)(1 - \sqrt{r}) = 1 + \sqrt{r} + r\omega - r\omega\sqrt{r} = r\omega - r\omega\sqrt{r}$$

$$a_{r^2} = a_1 + (r^2 - 1)d \Rightarrow a_{r^2} = 1 + \sqrt{r} + (r^2)(1 - \sqrt{r}) = 1 + \sqrt{r} + r^2 - r^2\sqrt{r} = r^2 - r^2\sqrt{r}$$

$$a_{r\omega} - a_{r^2} = r\omega - r\omega\sqrt{r} - (r^2 - r^2\sqrt{r}) = \boxed{r - r\sqrt{r}}$$

$$a_n = \omega^{rn}, r \times r\omega^n, \omega^y \quad r \times \omega^{rn} - \omega^{rn} = \omega^y - r \times r\omega^n \quad -r$$

$$\omega^{rn} (r - 1) = \omega^y - r \times \omega^{rn}$$

$$\omega^y = \omega^{rn} (r + 1) = \underbrace{\omega^{rn}}_{\omega^{rn}} \times \omega^1 \rightarrow \omega^{rn+1}$$

$$y = rn + 1$$

$$b_n = n, r, y \rightarrow r - n = y - r \rightarrow y = r - n$$

$$\left. \begin{array}{l} y = rn + 1 \\ y = r - n \end{array} \right\} \begin{array}{l} rn + 1 = r - n \\ rn = r - n - 1 \end{array} \quad rn = r \rightarrow \boxed{n=1}, y = \boxed{r} \Rightarrow ay = 1 \times r = \boxed{r}$$

$$r\omega - r, r\omega - 1, \omega^n, \dots \rightarrow (r\omega - 1) - (r\omega - r) = (\omega^n) - (r\omega - 1) \quad -\omega$$

$$r = r\omega + 1 \rightarrow r\omega = r, n = \frac{1}{r}$$

$$t_n = -r, 0, r, \boxed{4} \quad \begin{array}{c} \xrightarrow{+r} \xrightarrow{+r} \xrightarrow{+r} \end{array} \quad \begin{array}{l} d = r, t_1 = -r \Rightarrow t_r = t_1 + rd = -r + r(r) = \boxed{4} \end{array}$$

$$a_n = r, \omega, r, \dots \rightarrow d = r, a_1 = r \rightarrow a_n = rn + 1 \quad -r$$

$$b_n = r, \omega, r \rightarrow d = r, b_1 = r \rightarrow b_n = rn - 1$$

$$r_{n+1} = r_n - 1 \quad \boxed{r=n} \rightarrow r_{n+1} = \omega, r_{n-1} = \omega$$

$$\omega, 11, 1V, \dots \rightarrow t_n = 4n - 1 \rightarrow \omega, 11, 1V, r^3, r^9, r\omega, \dots$$

Fixed

$$a_1 + a_r + a_v = r1 \rightarrow r a_r = r1 \Rightarrow a_r = V$$

$$a_1 + a_r + a_d = 1 \cdot d \quad r a_v = 1 \cdot d \rightarrow a_v = r d$$

$$d = a_v - a_r = r d - V = r1 \Rightarrow a_1 = a_r - d = V - r1 = -r1$$

$$a_1 = -r1, a_r = V, a_v = r d$$

$$a_v - a_r + a_1 = V \rightarrow \frac{V}{a_1} = \frac{V}{-r1} = -\frac{1}{r}$$

$$a_1 + (a_1 + d) + (a_1 + r d) = r a_1 + r d = 1 d \quad r(a_1 + d) = 1 d \rightarrow a_1 + d = d \quad (1)$$

$$a_r + a_d = (a_1 + r d) + (a_1 + r d) = r d \quad r a_1 + r d = r d$$

$$(a_1 + d - d) \times r \quad \left\{ \begin{array}{l} d d = 1 d \rightarrow d = r \end{array} \right\} \Rightarrow a_1 = r$$

$$r a_1 + r d = r d$$

$$a_1 + a_r + a_v = 1 d \quad r a_r = 1 d \Rightarrow a_r = d \Rightarrow a_{10} = a_1 + 9 d = r + 9(r) = 10r$$

$$S_n = \frac{n}{r} (r a_1 + (n-1) d) \rightarrow S_9 = \frac{9}{r} (r a_1 + 1 d) \quad (9)$$

$$\left\{ \begin{array}{l} 9 a_1 + 9 d \\ S_9 = \frac{r}{r} (r a_1 + r d) \end{array} \right\} \Rightarrow \frac{9}{r} (r a_1 + 1 d) = \frac{r \times 9}{r} (r a_1 + r d)$$

$$r a_1 + 1 d = 9 a_1 + 9 d \rightarrow d = 8 a_1$$

$$a_r = a_1 + 1 d \rightarrow a_1 + r d = r a_1 \quad a_v = a_1 + r d \rightarrow a_1 + r a_1 = r a_1 \Rightarrow \frac{a_r}{a_v} = \frac{r a_1}{r a_1} = 1$$

$$a_1 = 11 \quad a_v = r d \rightarrow d = \frac{a_m - a_n}{m - n} = \frac{r d - 11}{r - 1} = \frac{r r}{r} = r \Rightarrow a_r = a_1 + r d$$

$$11 + r(r) = r r$$

$$d = \frac{r r - 11}{n - 1} = \frac{-r d}{n - 1} \quad a_r = r1 + r d = r1 - \frac{r d}{n - 1}$$

$$\Rightarrow \frac{r d}{n - 1} = 1 d \quad r d = 1 d n = 1 d \quad n = 4 \rightarrow n - r = 4 - r = r \Rightarrow d = -d$$

$$r1, r r, r1, r r, 11, r r$$