

٢٥ نمایش

$$5, 9, 13, 17, \dots$$

$\overline{4} \quad \overline{4} \quad \overline{4}$

$$a_n = 4n + 1 \quad \text{الف} \quad ①$$

$$a_{10} = (4 \times 10) + 1 = 41 \quad \text{ب}$$

$$4, 10, 16, 22, \dots$$

$\overline{6} \quad \overline{6} \quad \overline{6}$

$$S_{10} = \frac{10}{2} ((2 \times 4) + (9 \times 6)) = 250 \quad \text{الف} \quad ②$$

$$29, 30, 31, 32$$

چهار عدد متوالی

$$\Rightarrow 2(a_{30} + a_{31}) = \quad \text{ب}$$

$$2(a + 29d + a + 30d) =$$

$$2(4 + 114 + 4 + 120) = 496$$

$$d = 1 - \sqrt{r}$$

$$a_{r\sqrt{r}} = a_r + r d$$

(w)

$$a_{r\sqrt{r}} = r + r(1 - r\sqrt{r}) = r\sqrt{r} - r(1 - \sqrt{r})$$

$$a_{r\omega} = a_{r\sqrt{r}} + r d \rightarrow a_{r\omega} = r + r\sqrt{r} - r\sqrt{r} = r\omega - r\sqrt{r}$$

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

$$b_n = n, r, y \Rightarrow r = n + y \leadsto r - n = y$$

(r)

$$a_n = \omega^{r_n}, r_n \times \omega^{r_n}, \omega^y \Rightarrow r_n \times \omega^{r_n} = \omega^{r_n} + \omega^y$$

$$r_n \times \omega^{r_n} - \omega^{r_n} = \omega^y$$

$$\omega \times \omega^{r_n} = \omega^y$$

$$r_{n+1} = y$$

$$\begin{cases} r_{n+1} = y \\ r - n = y \end{cases} \Rightarrow r_{n+1} = r - n$$

$$n \neq 1, y = r \Rightarrow n y = 1 \times r = r$$

$$r_n - r = r_n + r_n - \varepsilon$$

$$-r + \varepsilon = r_n + r_n - \varepsilon n$$

$$n = \frac{1}{r}$$

$$\leadsto -r, 0, r, \varepsilon$$

(w)

$$a_n = \overbrace{r, \omega, V, \dots}^{r, r}$$

$$b_n = \overbrace{r, \omega, \omega, \dots}^{r, r}$$

$$a_{r_0} = r \times r_0 + 1 \leq r_1$$

$$b_{r_0} = r \times r_0 - 1 = r_1$$

(e)

$$\text{Let } n = r_{n-1}$$

$$r_{n-1} \leq \varepsilon$$

$$n \leq v$$

MP Cite

$$\begin{aligned} a_1 + a_p + a_p &= 21 \sim \begin{cases} a_1 + a_1 + d + a_1 + 2d = 21 \\ a_1 + a_1 + 2d + a_1 + 2d = 1.5 \end{cases} \\ a_1 + a_p + a_p &= 1.5 \end{aligned} \quad \textcircled{V}$$

$$\begin{aligned} 3d &= 16 \\ d &= \frac{16}{3}, a_1 = -11 \end{aligned}$$

$$\frac{a_p - a_p + a_1}{a_1} \sim \frac{a_1 + 2d - a_1 - d + a_1}{a_1} \Rightarrow \frac{a_1 + d}{a_1} = \frac{-21 + \frac{16}{3}}{-11}$$

$$\frac{-\frac{47}{3}}{-11} = \frac{1}{\frac{1}{11}}$$

$$\begin{aligned} a_1 + a_p + a_p &= 15 \sim \begin{cases} a_1 + a_1 + d + a_1 + 2d = 15 \\ a_1 + a_1 + 2d + a_1 + 2d = 15 \end{cases} \\ a_1 + a_1 + 2d &= 15 \end{aligned} \quad \textcircled{A}$$

$$\begin{aligned} a_1 - d &= -10 \\ a_1 &= d - 10 \end{aligned}$$

$$\rightarrow a_1 = (2 - 10) = -8$$

$$2d - 10 + 2d + 2d - 10 + d = 15$$

$$d = 5$$

$$a_{10} = a_1 + 9d \Rightarrow a_{10} = -8 + 9 \times 5 = 37$$

$$\frac{9}{5} (2a_1 + 1d) = 9 \times \frac{5}{5} \times (2a_1 + 1d) \quad \textcircled{A}$$

$$11a_1 + 17d = 55a_1 + 55d$$

$$d = 5a_1$$

$$\frac{a_{10}}{a_1} = \frac{a_1 + 9d}{a_1 + d} \Rightarrow \frac{a_1 + 45a_1}{a_1 + 5a_1} = \frac{46a_1}{6a_1} = \frac{23}{3}$$

$$a_n = 11, \dots, 37 \quad d = \frac{26}{4} = 6.5 \quad 11, 17.5, 24, 30.5, 37 \quad \textcircled{10}$$

$$b_n = 37, \dots, 17 \quad d = \frac{17 - 37}{n+1} = -2 \sim n = 8 \text{ or } 9$$

$$\begin{aligned} \rightarrow a_1 + 2d &= 37 \\ 37 + 2d &= 17 \\ d &= -10 \end{aligned}$$