

$$t_1 = f_0$$

$$t_f = u_1$$

$$\left. \begin{array}{l} r_d = r_1 \\ d = v \end{array} \right\}$$

$$v_n + r_1 = r_0 \Lambda$$

$$n = r_0 \Lambda$$

(1)

$$t_n = f_0 + (n-1)v \rightarrow v_n + r_1$$

(2)

$$101 \leq v_n + r_1 \leq 99v \quad t_n = v_n + r_1$$

(3)

$$\begin{array}{c} 14f \\ \leftarrow \\ 99v \end{array}$$

درستی

101

$$n = 14 = \text{اولین}$$

$$\frac{99v - 101}{v} + 1 = 129$$

(2)

$$a_{n+1} + a_{n+r} + a_{n+r} = -4n + 12$$

$$a_{14} + a_n$$

$$n=0 \rightarrow a_1 + a_r + a_r = 12$$

$$n=1 \rightarrow a_r + a_r + a_f = 4$$

(-)

$$a_1 - a_f = 4$$

$$-r_d = 4$$

$$d = -r$$

$$r a_1 + r d = 12$$

$$\rightarrow a = 4$$

$$t_n = 4 + (n-1) - r$$

$$t_n = \Lambda - r n$$

(2)

$$a_{14} + a_n = n - 14 = -\Lambda$$

$$a_{14} + a_n =$$

$$-14 + (-\Lambda) = -24 \quad + a_{14} = -24$$

$$\Lambda - r n = -24$$

مجموع این سه جمله

$$r^n - r, r^{n+1}, r^n - 1$$

(3)

$$t_n = \frac{t_{1r} + t_r}{r} \rightarrow$$

$$a_1 + r d = \frac{r a_1 + r d}{r}$$

$$r t_n = t_{1r} + t_r$$

$$r(r^{n+1}) = r^n - 1 + r^n - r$$

$$r^n \times r = (r^n)^r - r$$

$$r^{n+r} = r^n + r^n - r$$

$$0^r - r_0 - f = 0 \quad 0 = r$$

(2)

$$r^n = f$$

$$n = r$$

$$r^f - r + r^r + r^r - 1 = \frac{f}{r} - \frac{f}{r} + 14 + \Lambda$$

$$t_{ir} - t_{io} = a$$

$$r t_{ir} = r_0$$

$$t_{ir} + t_{io} = 2a$$

$$t_{ir} = 1a$$

$$t_{io} = 1a$$

②

$$t_{ri} = t_{io} + 1a$$

$$t_{ir} - t_{io} = a$$

$$rd = a$$

$$d = \frac{a}{r}$$

$$t_{ri} = 1a + rvd$$

$$t_{ri} = rvd$$

③

$$S_a = \frac{1}{r} (t_u + t_v + t_n + t_a + t_{io})$$

④

$$\frac{a}{r} (ra_1 + rd) = \frac{1}{r} \times \frac{a}{r} (ra_1 + rd)$$

$$[a a_1 + 1a d = \frac{1}{r} \times a a_1 + r a d] \times r$$

$$r a a_1 + 1a d = a a_1 + r a d$$

$$r a_1 + 1d = a_1 + r d$$

$$r a_1 = d$$

$$\frac{t_r}{t_i} = \frac{a_1 + r a_1}{a_1} = \frac{r a_1}{a_1} = r$$

✓ $\boxed{r}$

$$t_{ri} - t_{io} = a$$

$$t_n = t_{n-r} + 1a$$

$$t_n$$

⑤

$$(t_a - t_o)(t_a + t_o)$$

$$t_r = t_i + 1a$$

$$t_r = t_i + r d$$

$$d = a$$

$$rd = r_0$$

$$ra_1 + r_0$$

$$t_{ri} - t_{io} = a$$

$$\frac{(ra_1 + r_0) \times r_0}{(a_1 + r_0) \times 1}$$

$$= r_0$$

⑥

① $2(1 - \sqrt{3})$ و $2 + \sqrt{3}$ دوازدهم صانع شده.

② قدر نسبت ابدست یادید. شروع از: $2(1 - \sqrt{3})$

$$\frac{t_{12} - t_1}{+1} = \frac{2 + \sqrt{3} - 2 + 12\sqrt{3}}{12} = \frac{14\sqrt{3}}{12} = \frac{7\sqrt{3}}{6}$$

③ $2, 3, 2, 4n-3$ شروع از ②

$$2, 3, 2, 4n-3$$

$$\frac{22-2}{4n-2+1} = \frac{2(10)}{2(n-1)} \Rightarrow d = \frac{10}{n-1}$$

واسطه نام $n+1$ است $t_{n+1} = 11 = 2 + (n+1-1) \frac{10}{n-1}$

$$11n - 9 = 10n \Rightarrow n = 9$$

۱. نام و $n+4$ مجموع سوم و ۱۷م برابر است.

② اگر جمله نام $\frac{n}{2}$ باشد چند جمله صفاست؟

$$t_n + t_{n+4} = t_3 + t_{17}$$

$$a_1 + nd - d + a_1 - nd + 4d = 2a_1 + 14d$$

$$2a_1 + 4d = 2a_1 + 14d$$

$$4d = 10d$$

$$2n = 14$$

$$n = 7$$

پس جمله دوم صفاست.