

$$t_1 = \varepsilon_0$$

$$t_\varepsilon = t_1 + \nu d \rightarrow q_1 = \varepsilon_0 + \nu d$$

$$t_\varepsilon = q_1$$

$$\nu d = \nu d \rightarrow d = \nu$$

$$t_n = \nu_0 \Lambda$$

$$t_n = \nu n + \nu \nu = \nu_0 \Lambda$$

$$\nu n + \nu \nu = \nu_0 \Lambda$$

$$\nu n = 1 \nu \Lambda \rightarrow n = \nu \Lambda$$

$$q_1 + \nu = 1.01$$

$$q_1 \varepsilon + \nu = q_1 \nu$$

$$1.01, 1.01, 1.1, \dots, q_1 \nu$$

$$\frac{q_1 \nu - 1.01}{\nu} + 1 = 1.29$$

$$S_{1.29} = \frac{1.29}{\nu} (1.01 + q_1 \nu) = \frac{1.29}{\nu} (1.01 \nu) = \nu_0 \Lambda \nu$$

$$S_n = \frac{n}{\nu} (a_1 + a_n)$$

$$a_{n+1} = a_n + d$$

$$a_{n+\nu} = a_n + \nu d$$

$$a_{n+\nu} = a_n + \nu d$$

$$a_{n+1} + a_{n+\nu} + a_{n+\nu} = \nu a_n + \nu d$$

$$\nu a_n + \nu d = -\nu n + 1 \nu$$

$$a_n + \nu d = -\nu n + \varepsilon$$

$$a_1 + (n-1)d + \nu d = -\nu n + \varepsilon$$

$$a_n = -\nu n + \varepsilon - d$$

$$\nu a_n + \nu d = -\nu n + 1$$

$$\nu(-\nu n + \varepsilon - d) + \nu d = -\nu n + 1 - \nu d + \varepsilon d$$

$$\nu d = 0 \rightarrow d = 0$$

$$a_1 + a_n (-1 - d) + (-\nu_0 - d) = -\varepsilon \nu - \nu d$$

$$\rightarrow -\varepsilon \nu - \nu(0) = -\varepsilon \nu$$

$$t_w = r^n - 1$$

$$t_n = r^{n+1}$$

$$t_{1w} = r^{n+1} - r$$

$$a_{1w} - a_n = a_n - a_w$$

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

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

$$r^n - r - r^{n+1} - r^{n+1} + r^n - 1 = 0$$

$$r^n - r(r^n) - \varepsilon = 0 \quad \xrightarrow{t=r^n} \quad t - rt - \varepsilon = 0$$

$$(t - \varepsilon)(t + 1) = 0 \quad \rightarrow \quad t = \varepsilon \quad \text{or} \quad t = -1 \quad \Rightarrow \quad \boxed{t = \varepsilon} \checkmark$$

$$r^n = \varepsilon \rightarrow n = 1$$

$$a_w = r^1 - 1 = w$$

$$a_n = r^{1+1} = r^2 = 1$$

$$a_{1w} = r^\varepsilon - w = 1 - w = 1w$$

$$S = w + 1 + 1w = 2\varepsilon$$

$$a_n = a_1 + (n-1)d$$

$$a_{10} = a_1 + 9d$$

$$a_{14} = a_1 + 13d$$

$$a_{14} - a_{10} = \omega$$

$$(a_1 + 13d) - (a_1 + 9d) = \omega$$

$$4d = \omega \rightarrow d = \frac{\omega}{4}$$

ω

$$a_{14} + a_{10} = 4\omega$$

$$(a_1 + 13d) + (a_1 + 9d) = 4\omega$$

$$2a_1 + 22d = 4\omega$$

$$2a_1 + 22\left(\frac{\omega}{4}\right) = 4\omega$$

$$2a_1 + 11\omega = 4\omega \rightarrow a_1 = -\frac{3}{2}\omega$$

$$a_{14} = a_1 + 13d$$

$$a_{14} = -\frac{3}{2}\omega + 13\left(\frac{\omega}{4}\right) = \frac{17}{4}\omega$$

$\uparrow$
 a_{14}

$$S_n = \frac{\omega}{r} (ra_1 + \epsilon d) \quad S_{10} = \frac{10}{r} (ra_1 + 4d)$$

$$= \omega (ra_1 + 4d)$$

$$S_{10} - S_n = \omega (ra_1 + 4d) - \frac{\omega}{r} (ra_1 + \epsilon d)$$

$$S_n = \frac{1}{\omega} (S_{10} - S_n)$$

$$r \times \frac{\omega}{r} (ra_1 + \epsilon d) = \omega (ra_1 + 4d) - \frac{\omega}{r} (ra_1 + \epsilon d)$$

$$10(ra_1 + \epsilon d) = 10(ra_1 + 4d) - \omega(ra_1 + \epsilon d)$$

$$10ra_1 + 40d - 10a_1 - 40d = 10a_1 + 40d$$

$$10a_1 = 10d \rightarrow a_1 = \frac{d}{r}$$

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

$$\rightarrow \frac{d_r}{a_1} = \frac{\frac{rd}{r}}{\frac{d}{r}} = r$$

مجموعی دهم

و به (مجموعی اول)

سوی

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

$$wd = 1a \rightarrow d = a$$

$$t_a = a + 1d = a + \epsilon_0$$

$$t_w = a + \epsilon d = a + \nu_0$$

$$t_v = a + \gamma d = a + \nu_0$$

$$t_a^{\gamma} - t_w^{\gamma} = (t_a - t_w)(t_a + t_w)$$

$$\rightarrow \nu_0(\nu_a + \gamma_0) = \epsilon_0 a + \nu_{00}$$

$$t_v = a + \nu_0$$

$$\frac{t_a^{\gamma} - t_w^{\gamma}}{t_v} = \frac{\epsilon_0 a + \nu_{00}}{a + \nu_0} = \epsilon_0 \left(\frac{a + \nu_0}{a + \nu_0} \right) = \epsilon_0$$

$$t_a^{\gamma} - t_w^{\gamma} = \boxed{\epsilon_0 t_v}$$

$$a_1 = r(1 - \sqrt{r}) = r - r\sqrt{r}$$

$$a_{1\epsilon} = r + \sqrt{r}$$

$$a_{1\epsilon} = a_1 + r d \rightarrow r + \sqrt{r} = (r - r\sqrt{r}) + r d$$

$$\text{نفسه، سو} \rightarrow d = \sqrt{r}$$

$$(\epsilon_n - r) + r = \epsilon_{n-1} \leftarrow \text{نفسه، سو}$$

$$a_{\epsilon_n - 1} = a_1 + (\epsilon_n - r)d$$

$$(\epsilon_n - r)d = r_0 \rightarrow d = \frac{r_0}{\epsilon_n - r} = \frac{1\omega}{r_{n-1}}$$

$$a_n = a_1 + (n-1)d = 11$$

$$(n-1)\left(\frac{1\omega}{r_{n-1}}\right) = 9$$

$$1\omega n - 1\omega = 11n - 9$$

$$\frac{-9}{r} = \frac{r_n}{r} \rightarrow n = -r$$

$$a_n = a + (n-1)d$$

$$a_n + a_{n+\epsilon} = a_r + a_v$$

$$a_{n+\epsilon} = a + (n+r)d$$

$$[a + (n-1)d] + [a + (n+r)d] = [a + r d] + [a + \epsilon d]$$

$$(r_n + r)d = 1a \rightarrow r_n + r = 1 \rightarrow n = r$$

$$a_n = \frac{n}{r} \rightarrow a_r = \frac{r}{r}$$

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

$$a_k = 0$$

$$a + (k-1)d = 0$$

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

$$k = r - \frac{r}{rd}$$

$$\frac{r}{r} - r d + (k-1)d = 0 \quad (k-r)d = -\frac{r}{r}$$