

① $a_1 = 10$ $a_1 + 10d = 41$ (النیا صیبا بنی)

$\rightarrow 10d = 31 \rightarrow d = 3.1 \rightarrow 10 + 10(3.1) = 41 \rightarrow n = 2d$

② $100 > 100 \rightarrow n > 100 \rightarrow 100, 100, \dots$

$\frac{990 - 100}{10} + 1 = 100$

③ $a_{n+1} = a_n + d \rightarrow a_n + a_{n+1} + a_{n+2} = 10a_{n+1}$

$10a_{n+1} = -9a_n \rightarrow a_{n+1} = -\frac{9}{10}a_n$

$\rightarrow a_{10} + a_1 = -29 - 1 = -30$

④ $a_{10} + a_{100} = a_1 + a_1 \rightarrow r^{10} - 1 + r^{100} - 1 = 2(r^{10} - 1)$

$r^{100} - r^{10} = 2(r^{10} - 1)$

$z = r^{10}$ $\rightarrow z^2 - 2z - 1 = 0$ $\rightarrow z = 1 \pm \sqrt{2}$

$\rightarrow x = 1 \pm \sqrt{2}$

⑤ $10d = 31 \rightarrow d = 3.1$ $a_1 + 10d + 10d = 10a_1 + 10d = 41$

$\rightarrow 10a_1 = 31 \rightarrow a_1 = 3.1$

$a_{10} = a_1 + 9d = 3.1 + 9(3.1) = 30.2$

⑥ $\frac{a_1 + 10d}{a_1 + 100d} = \frac{1}{10} \rightarrow \frac{a_1 + 10d}{a_1 + 100d} = \frac{1}{10} \rightarrow 10a_1 + 100d = a_1 + 100d$

$\rightarrow 9a_1 = 0 \rightarrow a_1 = 0$

$\rightarrow \frac{a_1 + 10d}{a_1} = \frac{10d}{0} = \infty$

$$\textcircled{v} \quad a_1 + nd - d = a_1 + nd - kd + 1d \rightarrow d = \Delta$$

$$\frac{(t_q - t_k)(t_q + t_k)}{t_v} = \frac{(a_1 + k_0 - a_1 - k_0)(ka_1 + k_0)}{a_1 + k_0}$$

$$\frac{k_0 a_1 + 1k_0}{a_1 + k_0} = \frac{k_0(a_1 + k_0)}{a_1 + k_0} = \underline{k_0}$$

$$\textcircled{1} \quad \frac{r + \sqrt{r} - r + 1\sqrt{r}}{1r + 1} = \frac{1\sqrt{r}}{1r} = \sqrt{r} = d$$

$$\textcircled{9} \quad \frac{r - r}{k_{n-r}} = \frac{r_0}{k_{n-r}} = d \quad \text{II} = a_{n+1} = r + n \left(\frac{r_0}{k_{n-r}} \right)$$

$$\text{II} = r + \frac{r_0 n}{k_{n-r}} \rightarrow 4 = \frac{r_0 n}{k_{n-r}} \Rightarrow 4n \Delta 1 \rightarrow \underline{n = r_0}$$

$$\textcircled{10} \quad a_n + a_{n+1} = a_n + a_{n+1} \rightarrow n = 1$$

$$a_1 + a_{11} = a_{11} + a_{11}$$

$$a_1 = r a_{11} \quad a_1 + v d = r a_1 + d \rightarrow a_1 = -d$$

$$a_n = a_1 + (n-1) - a_1 = 0 \rightarrow r a_1 - n a_1 = 0$$

$$\boxed{r n = r}$$