

① $t_1 = \varepsilon_0$ $t_2 = t_1 + \psi d_1 \rightarrow q_1 = \varepsilon_0 + \psi d_1 \rightarrow \psi d_1 = \psi$
 $\left. \begin{array}{l} \varepsilon = 41 \\ t_n = \psi_0 \Lambda \\ n = ? \end{array} \right\} \begin{array}{l} a_n = \psi n + \psi \psi \\ a_n = \psi n + \psi \psi = \psi_0 \Lambda \\ \psi n = \psi \psi \quad \boxed{n = \psi \psi} \end{array}$ ✓

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② $1.01 \{ \psi n + \psi \} a_n \psi$ $a_n = \psi n + \psi$
 $\frac{99\psi - 1.01}{\psi} + 1 = 100\psi + 1 = 100\psi$ ✓

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③ $a_{n+1} + a_{n+2} + a_{n+3} = -4n + 12$ $n=0 \rightarrow a_1 + a_2 + a_3 = 12$
 $a_1 + a_2 + a_3 = 12 \rightarrow \varepsilon_1 + \varepsilon_2 + d + \varepsilon_1 + \psi d = 12$
 $\psi a_1 + \psi d = 12$
 $\psi a_1 + \psi d = 12 \rightarrow a = 4$
 $a_1 - a_2 = 4$
 $a_1 - a_1 - \psi d = 4 \rightarrow \psi d = -4 \rightarrow \boxed{d = -2}$

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$a_n = -\psi n + \Lambda$
 $a_{1r} + a_n = ? \rightarrow \begin{array}{l} -\psi(1) + \Lambda = -12 \\ -\psi(1r) + \Lambda = -24 \end{array} \rightarrow \begin{array}{l} -\psi - \Lambda = -12 \\ -17\psi - \Lambda = -24 \end{array}$ ✓

④ $a_n = \frac{a \psi + a_1 \psi}{\psi} \rightarrow \psi a_n = a \psi + a_1 \psi$

$\psi(\psi^n + 1) = (\psi^n - 1) + (\psi^{r^n} - \psi)$
 $\Rightarrow \psi^n + \psi = \psi^{r^n} + \psi^n - \varepsilon$
 $\Rightarrow \psi^n = \varepsilon$
 $\psi^n = \varepsilon \rightarrow \psi^n - \psi^n - \varepsilon = 0 \rightarrow (\psi - \varepsilon)(\psi + 1) = 0 \rightarrow \psi = \varepsilon = \psi^n \rightarrow \boxed{n = r}$ ✓

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⑤ $a_{1r} - a_{10} = 0 \rightarrow a_{10} - a_{10} + \psi d = 0$
 $a_{1r} + a_{10} = \psi a_1 + \psi_0 d_1 = \psi \psi$
 $\frac{\psi_0(\psi \psi)}{\psi_0}$
 $\psi a_1 = -\psi \psi$
 $a_1 = -\psi \psi$

$\frac{\psi d = \psi}{d = \psi \psi}$

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$a_{1r} = \frac{a_1}{-1\psi \psi} + \frac{\psi_0 d_1}{\psi_0} = \psi - 1\psi \psi + \psi_0 = \psi \psi$ ✓

9) $S_b = b(a+rd)$
 $S_{a+1} = b(a+rd)$

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

$\frac{a+ra}{a} = \frac{r}{1}$

2) $t_n = t_{n-1} + 1b$

$t_b = t_{r+1}b \rightarrow t_b = t_r + rb$

$(t_1^r - t_b^r) \rightarrow \frac{(t_1 + t_b)}{r_0} \left(\frac{t_1 - t_b}{r_0} \right)$

$t_r = t_b + \frac{rb}{r_0}$

$\frac{(rt_b + r_0)(r_0)}{t_b + r_0} = \frac{r_0 t_b + r_0^2}{t_b + r_0} = \frac{r_0(t_b + r_0)}{t_b + r_0} = r_0$

1) $\frac{x + \sqrt{x} - \sqrt{x + 15}}{1x} = \frac{\sqrt{x^2}}{1x} = \sqrt{x}$

$\frac{xy^2 - y^2}{1 + 15y} = d$

9) $\frac{xy^2 - y^2}{1 + 15y} = d$

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

$a_{n+1} = r + d_n$

$(a = n(\frac{1b}{r_{n-1}})) \times r_{n-1}$

$a(r_{n-1}) = 1b_n$

$(1b_{n-1} = 1b_n)$

$\frac{1b_n}{r_n} = 1 \rightarrow 1b_n = r_n$

$a_1 = r$
 $a_{n-1} = r$
 $a_{n-1} = a_1 + (n-1)d \rightarrow r = r + (n-1)d \rightarrow 0 = (n-1)d$
 $d = \frac{1b}{r_{n-1}}$

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

$a_n + a_{n+1} = a + r + a + r$

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

$2a_1 + (n-1)d = 2a_1 + r$

$(r+r)d - (n-1)d = 0$

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

$a_1 + (n-1)d = 0$

$n = 1 \rightarrow a_1 = r$

$a_1 = r$
 $a_2 = r + d$
 $a_3 = r + 2d$
 $a_4 = r + 3d$