

$$t_1 = \varepsilon \quad | \quad t_2 = 41 \quad | \quad t_n = 2 \cdot n$$

$$t_2 - t_1 = 36 \Rightarrow 36 = 21 \Rightarrow d = 15$$

$$t_n = 15n + 21$$

$$15n + 21 = 2 \cdot n \Rightarrow 13n = -21 \Rightarrow n = -20$$



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$$9n = 15 \Rightarrow 9n = 15 \cdot 1$$

$$1 \cdot 1 \leq 15n + 21 < 99 \Rightarrow 9n \leq 78 \Rightarrow 9n \leq 86$$

$$12 \leq n < 12.2$$

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$$1 \cdot 1 + (n-1) \cdot 15 = 99$$

$$15n - 14 = 98 \Rightarrow 15n = 112 \Rightarrow n = 12.2$$

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$$15n + 21 = -4n + 12 \Rightarrow \frac{a}{d} = -\frac{1}{5} \Rightarrow t_n = -\frac{1}{5}n + \frac{12}{5}$$

$$a_d - a_r = -4$$

$$a_1 + 4d - a_1 - d = -4 \Rightarrow 3d = -4$$

$$d = -\frac{4}{3}$$

$$a_1 = 4$$

$$t_n = a_n + d \Rightarrow a_{n+1} + a_{n+2} + a_{n+3} = 3a_n + 3d$$

$$a_{11} \cdot (-\frac{4}{3} \cdot 11) + 12 = -32$$

$$a_n \cdot (-\frac{4}{3} \cdot n) + 12 = -12$$

$$\Rightarrow a_{11} + a_n = -32 - 12 = -44$$

$$a_{11} + a_n = 12 + 3(-\frac{4}{3}) = -12$$

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$$\left. \begin{aligned} t_n &= a_n + d = \frac{1}{n+1} \\ t_n &= a_n + d = \frac{1}{n+1} \end{aligned} \right\} \Rightarrow t_1 + t_2 + t_3 + \dots + t_n = \frac{1}{2} \Rightarrow \frac{1}{2} = \frac{1}{2} \Rightarrow \frac{1}{2} = \frac{1}{2}$$

$$t_1 = a_1 + d = \frac{1}{2} - \frac{1}{2} = 0$$

$$\frac{1}{2} - \frac{1}{2} = 0 \Rightarrow \frac{1}{2} - \frac{1}{2} = 0 \Rightarrow \frac{1}{2} - \frac{1}{2} = 0$$

$$\frac{1}{2} \left(\frac{1}{2} - \frac{1}{2} \right) = 0 \Rightarrow \frac{1}{2} \cdot \frac{1}{2} = 0 \Rightarrow \frac{1}{4} = 0$$

$$S = 1 + 1 + 1 = 3$$

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$$a_{11} - a_1 = 10 \Rightarrow d = \frac{10}{10} = 1$$

$$a_1 + a_{11} = 2a_6 = 20 \Rightarrow a_6 = \frac{20}{2} = 10$$

$$a_{11} = a_1 + d = \frac{20}{2} = 10$$

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$$\left. \begin{aligned} S_1 &= d \frac{a_1 + a_1}{r} = d(a_1 + vd) \\ S_r &= d \frac{a_r + a_1}{r} = d(a_1 + vd) \end{aligned} \right\} \begin{aligned} S_1 &= \frac{1}{r} S_r \Rightarrow d(a_1 + vd) = \frac{d}{r}(a_1 + vd) \\ ra_1 + rd &= a_1 + vd \Rightarrow ra_1 = d \end{aligned}$$

$$\frac{a_r}{a_1} = \frac{ra_1}{a_1} = r \quad \checkmark \quad a_r = a_1 + d = ra_1$$

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$$\left. \begin{aligned} t_n = t_{n-r} + 1 &\Rightarrow t_n - t_{n-r} = rd + 1 \\ t_E = t_1 + d \\ t_E = t_1 + rd \end{aligned} \right\} \Rightarrow d = 0$$

$$(t_1 + 1)(t_1 - t_0) = 1 \dots$$

$$\frac{rt_1 + rd}{v} \quad t_v = t_1 + rd \Rightarrow \frac{1 \cdot 1}{v} = \frac{1}{v} \quad \checkmark$$

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$$t_1 = ? \Rightarrow t_1 = 1 \Rightarrow t_r = t_1 + rd \Rightarrow t_1 = 0$$

$$t_1 = r(1 - \sqrt{r}) = r - r\sqrt{r}$$

$$t_E = r + \sqrt{r}$$

$$t_E = t_1 + rd = r - r\sqrt{r} + r = r = 1 + rd = 1 + \sqrt{r} \Rightarrow d = \sqrt{r} \quad \checkmark$$

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$$d = \frac{b-a}{(En-r)+1} = \frac{r-r}{En-r} = \frac{r}{En-r} \quad \left\{ \begin{aligned} t_1 &= r, \quad t_n = r \\ t_n &= r \end{aligned} \right.$$

$$t_{n+1} = t_1 + nd \Rightarrow nd = 4$$

$$nd = \frac{r \cdot n}{En-r} = 4$$

$$r \quad 11 \quad r \quad r$$

$$r \cdot n = 44n - 11 \quad n = 11 \quad \checkmark$$

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$$a_n + a_{n+1} = a_r + a_{10}$$

$$(a + (n-1)d) + (a + nd) = a + rd + a + 9d$$

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$$(a + nd - d) + (a + nd + rd) = (a + rd) + (a + 9d)$$

$$ra + (rn + r)d = ra + rd + (rn + 9)d = 10d$$

$$(r + 9)d = 10d \Rightarrow r + 9 = 10 \Rightarrow r = 1 \quad \checkmark$$

$$a_n = ra \rightarrow a_1 + vd = r(a_1 + rd) \rightarrow ra_1 = -rd \rightarrow a_1 = -d$$

$$a_2 = \dots \rightarrow a_1 + (t-1)d \rightarrow -d + td - d = \dots \rightarrow td = rd \xrightarrow{d \neq 0} t = r$$