

تالیف شماره: 13

نام دانش‌آموز: فرزین

$$a = 8, \quad a + 3d = 41, \quad 3d = 33, \quad d = 11 \quad -1$$

$$t_n = a + (n-1)d \quad t_n = 8 + (n-1)11 = 201 \quad n-1 = \frac{193}{11} \quad 22 \Rightarrow n = 23$$

$$\begin{array}{r} 998 \text{ L } V \\ \hline \end{array} \quad \begin{array}{r} 102 \text{ L } V \\ \hline \end{array} \Rightarrow \begin{array}{r} 998 \text{ L } V \\ 121 \\ \hline 3 \end{array} \quad \begin{array}{r} 102 \text{ L } V \\ 12 \\ \hline 3 \end{array} \quad -2$$

$$121 - 12 + 1 = 110$$

$$a + nd + a + 2nd + a + 3nd = -9n + 12 \quad 3a + 6nd = -9n + 12 \quad a + 2nd = -3n + 4 \quad -3$$

$$d = -1, a = 8 \quad a_7 + a_8 = 2a + 3d = (2 \times 8) + (-1 \times 3) = 16 - 3 = 13$$

$$r^x - 1 = a + 2d \quad r^{2x+1} = a + 3d \quad r^{5x} - 3 = a + 4d \quad -4$$

$$\Delta d = r^{2x+1} - r^{2x+1} = r^{5x} - 3 - r^{2x+1} \Rightarrow r^{2x+1} \quad r^{5x} - r^{2x} = -8 \quad r^x(r^3 - 1 - r^x) = -8$$

$$r^x(1 - r^x) = -8$$

$$a_10 - a_2 = 8 \quad a + 9d - a - d = 8 \quad 8d = 8 \quad d = 1, a \quad -5$$

$$a_{10} + a_{12} = 20 \quad 2a + 20d = 20 \quad 2a - 2 = 20 \quad 2a = 22 \quad a = 11, d$$

$$a_{21} = a + 20d \Rightarrow 11 + 20(1) = 31, d + (-1, d \times 2) = 31, d - 2 = 29, d$$

$$\frac{a+a+d+a+b+a+3d+a+5d}{a+2d+a+4d+a+6d+a+8d+a+d} = \frac{1}{3} = \frac{2a+10d}{2a+32d} \Rightarrow 12a+12d = 2a+10d \quad -4$$

$$10a = -2d \quad a = -\frac{1}{5}d \quad \frac{b_2}{a_1} = \frac{a+d}{a} = \frac{-\frac{1}{5}d+d}{-\frac{1}{5}d} = \frac{-\frac{4}{5}d}{-\frac{1}{5}d} = \frac{4}{1} \quad \textcircled{\frac{4}{1}}$$

$$t_9 - t_5 = (t_9 + t_5)(b_9 - t_5) = (2a+10d+5d)(5d) \quad -V$$

$$a+(n-1)d = a+(n-5)d+10d \Rightarrow 5d = 10d \Rightarrow d = 0$$

$$t_7 = a+6d \quad \frac{t_9 - t_5}{b_7} = \frac{r_0(2a+5d+r_0)}{a+r_0} = \frac{5r_0(a+r_0)}{a+r_0} = \underline{\underline{5}}$$

$$\frac{r-12\sqrt{r}-r\sqrt{r}}{r+1} = \frac{-12\sqrt{r}}{r} = \underline{\underline{-\sqrt{r}}} = d \quad -1$$

$$\frac{r_1 - r_2}{\sum_{n=1}^{\infty} r_{n+1}} = \frac{r_0}{\sum_{n=1}^{\infty} r_n} = \frac{1}{r_{n-1}} = d \quad a=r \quad r+(n-1)\left(\frac{1}{r_{n-1}}\right) = 11 \quad -4$$

$$\frac{12n+12}{r_{n-1}} = 9 \quad 12n+12 = 9r_{n-1} \quad r_2 = r_n \quad n=1$$

$$a+(n-1)d + a+(n-5)d = a+5d + a+9d \quad a+(n-1)d = r_0a + \left(\frac{n}{r_0} - 1\right)d \quad -1$$

$$a+nd-d = r_0a + \left(\frac{n}{r_0} - 1\right)d - d \Rightarrow r_0d = r_0a + \frac{1}{r_0}nd \quad r_0a + r_0nd + d = r_0a + nd \Rightarrow r_0nd = 1nd$$

$$n=4 \quad r_0d = \frac{1}{r_0}a + \frac{1}{r_0}4d \Rightarrow a = -1, 5d$$

$$t_n = a+(n-1)d = -1, 5d + (n-1)d = e \quad (n-1)d = \frac{1, 5d}{\frac{r_0}{a}}$$