

۱
 $-1x + 1 = b + c = 1 - \frac{1}{4} = \frac{3}{4}$
 $t_1 = 2b + c = -1$
 $b = -\frac{1}{4}$
 $c = 0$
 $a_n = \frac{1}{4}n^2 - \frac{1}{4}n$
 $t_{10} = \frac{1}{4} \times 100 - \frac{1}{4} \times 10 = 14.75$

۲
 $n = n^2 - \frac{n(n+1)}{2} = \frac{n^2 - n}{2} = 55$
 $110 = n^2 - n$
 $n = 11$

۳
 $t_{11} = (1 \times 11 - 3) + (1 \times 11 + 1) =$
 $1 \times 5 + 4 \times 5 = 13$

۴
 $\frac{(-1)^n}{n}$
 $\frac{1}{4} - (-1) = \frac{5}{4}$

۵
 $b_n = (-1)^n - \sqrt{n} \rightarrow t_{10}$
 $(-1)^{10} - \sqrt{10} = -\sqrt{10}$
 $a_n = -\sqrt{n} + \sqrt{2} \rightarrow t_k$
 $-\sqrt{n} + \sqrt{2} = -\sqrt{10}$
 $-\sqrt{n} = -\sqrt{10} - \sqrt{2}$
 $n = -10 - 2 \times$

۶
 $t_{10} - t_5 = 12$
 $10d = 12 \Rightarrow d = \frac{6}{5}$
 $t_4 - t_1 = ?$
 $3d = 3 \times \frac{6}{5} = \frac{18}{5}$

۷
 $t_1, t_2, t_3 = a_n \Rightarrow t_1 = 3, t_2 = 3 + 2 \times 2 = 7$
 $t_1, t_2 = b_n \rightarrow$
 $3, 7, 11, \dots, n - 5$

۸
 $t_n = \frac{1}{5}, \frac{4}{5}, \frac{10}{5}, \frac{18}{5}, \dots$
 $n - 5 < 4n + 9$
 $2n < 14$
 $n < \frac{14}{2}$
 $n < 7$

$$t_n = 4, 9, 9, 4, 0, \dots$$

$\begin{array}{ccccccc} & & \nearrow & \nearrow & \nearrow & & \\ & & 4 & 9 & 9 & 4 & 0 \\ & \nwarrow & \nwarrow & \nwarrow & \nwarrow & & \\ & & 4 & 9 & 9 & 4 & 0 \end{array}$

$$\begin{matrix} 1a_2 - 1^4 \\ a_2 - \frac{1^4}{1} \end{matrix}$$

$$t_1 = -\frac{1^4}{1} + b + c = 4 \Rightarrow b + c = \frac{10}{1} \quad (9)$$

$$t_2 = -\frac{1^4}{1} \times 2 + 2b + c = 9 \Rightarrow 2b + c = 11$$

$$t_n = An^2 + Bn$$

$$A = \frac{1^4}{1} \quad B = \frac{10}{1}$$

$$1^4 A + \omega B =$$

$$-\frac{1^4}{1} \times 1^4 + \omega \times \frac{10}{1} = \frac{44}{1} = \frac{1^4 \omega}{1}$$

$$b = \frac{10}{1}$$

$$c = 0$$

$$t_n = -4, -9, 0, \dots$$

$\begin{array}{ccccccc} & & \nearrow & \nearrow & \nearrow & & \\ & & -4 & -9 & 0 & & \\ & \nwarrow & \nwarrow & \nwarrow & \nwarrow & & \\ & & -4 & -9 & 0 & & \end{array}$

$$\begin{matrix} 1a_2 + 1 \\ a_2 + 1 \end{matrix}$$

$$b + c = -1$$

$$2b + c = -1$$

$$\begin{matrix} b = -1 \\ c = -4 \end{matrix}$$

$$n^2 - n - 4$$

$$(10)$$

$$t_1 = 1 \quad t_2 = 1$$

$$\begin{matrix} -1 \times a_1 + d_2 \times 1 \\ a_1 + 1 \times d_2 \times 1 \end{matrix}$$

$$1d_2 = b$$

$$a_2 = a$$

$$a_1 = 14$$

$$a_n + 1 = 14 + (n-1) \times 1$$

$$n^2 - n - 4 = a_n + 1$$

$$n^2 = 4n + 14$$

$$n^2 - 4n - 14 = 0$$

$$(n-7)(n+2) = 0$$

$$\boxed{n=7} \quad n=2 \times$$