

$t_n = 3n^2 - 1$ $t_1 = 2$ $t_2 = 11$ $t_3 = 26$ $t_4 = 47$ $t_5 = 76$	$t_n = \frac{2n+1}{n+4}$ $t_1 = \frac{3}{5}$ $t_2 = \frac{5}{6}$ $t_3 = 1$ $t_4 = \frac{9}{8}$ $t_5 = \frac{11}{9}$	۱
$t_n = \frac{(-1)^n}{\sqrt{n+2}} \Rightarrow t_{13} = \frac{(-1)^{13}}{\sqrt{13+2}} = \frac{-1}{\sqrt{15}} = \frac{-1}{\sqrt{15}}$ $t_n = 2n - \left\lfloor \frac{n}{4} \right\rfloor \Rightarrow t_{13} = 26 - \left\lfloor \frac{13}{4} \right\rfloor = 26 - 3 = 23$		۲
$t_n = 2n - 10$ $2n - 10 < 0$ $2n < 10$ $n < 5$ $n = 1, 2, 3, 4$ $\boxed{4}$ $t_n = n^2 - 12n + 27$ $(n-4)(n-9) < 0$ $n = (4, 9)$ $\boxed{4}$		۳
$t_n = 2n - 16$ $n = 1, 2, \dots, 8 \rightarrow$ نایب $\rightarrow$ $\boxed{8}$ $t_n = n^2 - 12n + 27$ $n^2 - 12n + 27 < 0$ $(n-3)(n-9) < 0$ $[3, 9] \rightarrow$ $\boxed{6}$		۴
$t_f = 7$ $t_g = 12$ $t_r = t_f - d$ $7 - 3 = \boxed{4}$ $t_r = 4$ $t_g = t_f + \omega d$ $12 = 7 + \omega d$ $15 = \omega d$ $\boxed{d=3}$		۵

$$t_n = n^2 - 9n + 1 \rightarrow \frac{-b}{2a} \rightarrow \frac{-(-9)}{2 \times 1} = \frac{9}{2} = 4.5 \quad 3.5 \text{ n}$$

$$(3) = 3(9) - 2 = 9 - 18 + 1 = -8 \quad (-8)$$

6

$$t_n = n^2 - 9n + 1 \rightarrow n=1 \rightarrow (1)^2 - 9(1) + 1 = 1 - 9 + 1 = -7$$

$$t_{11} = -1, -7, -11, -13, -11, -7, -1$$

$$t_{10} = ? \quad t_n = n^2 - 9n + 1 \Rightarrow 10^2 - 9(10) + 1 = 100 - 90 + 1 = 11 \quad b = -9$$

7

$$n^2 - 9n + 1 \leq t_{10} = 100 - 90 + 1 = 11 \quad \{1\}$$

$$t_{10} = 11$$

$$t_n = -9, -1, 11, 21$$

$$+a \quad +b \quad +c$$

$$+e \quad +f$$

$$t_n = ?$$

$$2x^2 + 6n - 7 \leftarrow ax^2 + bx + c$$

$$a = \frac{2}{1} = 2$$

8

$$2 + 6 - 7 = 1 \quad (b = -1)$$

$$t_n = 2n^2 - n - 7$$

$$(-\infty, a + \epsilon) \cap [2a + 1, +\infty) \neq \emptyset \rightarrow a + \epsilon < 2a + 1$$

$$\rightarrow a + \epsilon < 2a + 1 \rightarrow \epsilon < a + 1 \rightarrow a \in [2, +\infty)$$

9

$$x < 100, x \in \mathbb{N} \rightarrow x \in [1, 100]$$

$$f(x) = \frac{1}{x} + 1$$

$$(الف) 1 \leq x_n \leq 100 \rightarrow 1 \leq n \leq 33 \rightarrow 33 \quad (33 - 1 + 1)$$

10

$$(ب) 1 \leq x_n \leq 100 \rightarrow \frac{1}{2} \leq n \leq 2 \rightarrow 1 \leq n \leq 2 \rightarrow 2 - 1 + 1 = 2$$

$$(ج) 1 \leq x_n \leq 100 \rightarrow \frac{1}{10} \leq n \leq \frac{2}{3} \rightarrow 1 \leq n \leq 2 \rightarrow 2 - 1 + 1 = 2$$

$$(د) \{(الف) + (ب)\} = 33 + 2 = 35$$