

$$1+0, 1+1, 1+2, 1+3, \dots$$

$1, 2, 3, 4, \dots$

$+1, +2, +3, \dots$

$$a_n = n + \frac{n(n-1)}{2}$$

(1)

$$a_1 = 1 + \frac{1(1-1)}{2} = 1$$

$$a_2 = 2 + \frac{2(2-1)}{2} = 3$$

شماره $\frac{n(n-1)}{2}$

$0, 1, 3, 6, \dots$

$$a_{10} = 10 + \frac{10(10-1)}{2} = 55$$

$$a_n = n + \frac{n(n-1)}{2}$$

$a_n = \text{شماره} + \text{شماره}$

$0, 1, 3, 6, 10, 15, 21, \dots$

(2)

~~$a_n = 2n - 1$~~

~~$1, 3, 5, 7, 9, \dots$~~

$a_n = 2n - 1$ در هر یک از این موارد عدد فرد می باشد
و به عنوان به جز جمله اول

$$2n - 1 \neq 0$$

$$2n \neq 1$$

$$n \neq \frac{1}{2}$$

$$2n + 1 = n$$

$$n = 1$$

$$2n - 1 = 9$$

$$2n = 10$$

$$n = 5$$

$n = 5$ است

$$2n - 1 = n$$

$2n - 1 = 9$

$$2n - 1 = 9$$

$$2n = 10$$

$$n = 5$$

$n = 5$ است

$$2n - 1 = 9$$

$$2n = 10$$

$$n = 5$$

$$f_n = 5, 9, 13, \dots$$

$\begin{matrix} \swarrow & \searrow \\ +4 & +4 \end{matrix}$

$$f_{n+1} = a_n$$

(۱۳)

$$a_{11} = f(11) + 1 = \underline{45}$$

$$f_n = 5, 13, 21, \dots$$

$\begin{matrix} \swarrow & \searrow \\ +1 & +1 \end{matrix}$

$$a_n = 11n - 3$$

$$a_{11} = 11(11) - 3 = \underline{121}$$

(-1)

(۱۴)

$\left(-1\right), \left(\frac{1}{2}\right), -\frac{1}{3}, \frac{1}{4}, \dots$

← کترین عدد بترین عدد → اعداد زوج کوچکتر

و فردها بزرگتری شوند
عنتیها

$$\frac{1}{2} - (-1) = \left(\frac{3}{2}\right)$$

و
عینان اختلاف

$$b_{11} = (-3)^{11} - \sqrt[11]{(11)} = -27 - 21 = \underline{-48} \quad (۱۵)$$

$$-5^{11} + 22 = -41$$

$$-5n = -40$$

$$\boxed{n=14} \Rightarrow \boxed{k=14}$$

$$\textcircled{1} \quad d = \frac{11}{10-9} = 11 \quad (9)$$

$$\left. \begin{aligned} a_9 &= a + 9d \\ a_{10} &= a + 10d \end{aligned} \right\} \Rightarrow \begin{aligned} 10d &= 11 \\ d &= 11 \end{aligned}$$

$$a_9 = 11 + 9d$$

$$a_1 = -1 + d$$

$$10d = 11 \Rightarrow d = 1.1$$

اختلاف

(V)

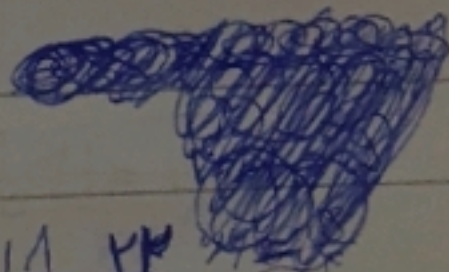
$$d = \frac{10-9}{11-10} = \frac{1}{1} = 1$$

$$a_n \text{ دالة } \rightarrow 1, 2, 3, 4, \dots$$

$$b_n \text{ دالة } \rightarrow 1, 2, 3, 4, \dots \quad \boxed{b_n = 1n - 1}$$

(A)

$$t_n = \frac{1n-1}{1n+1}$$



$$\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \frac{6}{7}, \dots$$

$$\textcircled{1.5}$$

$$= 1.5$$

$$9, 9, 9, 9, 0, \dots$$

$$\begin{array}{cccc} \underbrace{+10} & \underbrace{+0} & \underbrace{-10} & \underbrace{-9} \\ \underbrace{-10} & \underbrace{-10} & \underbrace{-10} & \end{array}$$

$$r\alpha = -10$$

(9)

$$\alpha = 1, 0 \quad \begin{array}{l} an^r + bn + c \\ \downarrow \\ -1, 0 \end{array}$$

$$\alpha_n = \cancel{1, 0} \times \cancel{10}^r + Bn = 9$$

$$A = 10, 0$$

$$Bn = -1, 0$$

$$B = \frac{-1, 0}{10} = -1, 0$$

$$A = 1, 0$$

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

$$\begin{array}{cc} \underbrace{+10} & \underbrace{+10} \\ & \underbrace{+10} \end{array}$$

(10)

$$\alpha = 1$$

$$an^r + bn + c$$

$$d = \frac{10(1-10)}{1-10} = d$$

$$\alpha_1 = 1 + b + c = -9$$

$$b + c = -10 \rightarrow -b - c = 10$$

$$\alpha_n = 10, 10, 10, 10, \dots$$

$$\underbrace{+10}$$

$$\alpha_r = 10 + 10b + c = -10$$

$$10b + c = -20$$

$$+ \quad -b - c = 10$$

$$\boxed{b = -1} \quad \boxed{c = -9}$$

$$t_n = n^r + (-n) - 9$$

$$\alpha_n = dn + 10$$

$$\boxed{99}$$

$$\boxed{99}$$

$$n=9$$

$$n=9$$

$$dn + 10 = n - n - 9$$

$$10 = n - n - 9$$

$$\boxed{n=9}$$

$$\boxed{99}$$