

۱، ۵، ۱۲، ۲۲

$$s = n^2 + \frac{n(n+1)}{2} - n \quad a_{10} = 10^2 + \frac{1 \times 11}{2} - 100 = 145$$

۱، ۴، ۹، ۱۶

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

$$n = 55 \rightarrow 110 = n(n-1) \rightarrow n = 11$$

مجموعہ عمومی
مجموعہ خاص

مجموعہ عمومی $\rightarrow 1 + 4n$
مجموعہ خاص $\rightarrow f(n-1)$

$$n=11 \rightarrow \begin{cases} 1 + f(11) = 45 \\ f(10) = 40 \end{cases} \rightarrow \begin{cases} 40 + 45 = 85 \\ 85 + 45 = 130 \end{cases}$$

اختلاف $= \frac{2}{2}$
بزرگترین $\frac{1}{2}$ و $\frac{1}{2}$ و $-\frac{1}{2}$ و $\frac{1}{2}$
کوچکترین

$$b \times s (-3)^2 - 7(+3) = -27 - 21 = -48$$

$$a_n = -an + 22 = -4n \rightarrow -an = 7 \rightarrow n = 14$$

$$a_{10} - a_7 = 12 \rightarrow a_1 + 9d - a_1 - 6d = 12 \rightarrow 3d = 12$$

$$t_9 - t_1 = 8d = 16 \rightarrow t_1 + 8d - t_1 = 16 \rightarrow 8d = 16 \rightarrow d = 2$$

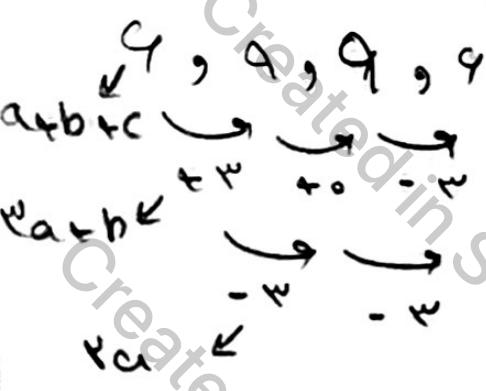
$$\begin{cases} a + s + a + d = 7 \\ a + s + a + 2d = 10 \end{cases} \rightarrow \begin{cases} 2a + s + d = 7 \\ 2a + s + 2d = 10 \end{cases} \rightarrow \begin{cases} a + s = 7 - d \\ a + s + 2d = 10 \end{cases}$$

$$\begin{aligned} a_1, a_2 &\rightarrow b, s^2 \\ a_2 &\rightarrow b + d = 11 \\ d &= 7 \\ a_1, a_2, a_3 &\rightarrow b, s^2, a_3 = 11 + 7 = 18 \end{aligned}$$

$$\frac{fn - 2}{2n + 2} \rightarrow \frac{11n - 2}{2n + 2} \rightarrow 11n - 2 < 2n + 2$$

$$2n < 12 \rightarrow n < 6$$

$$16 < 9 \Rightarrow 5$$

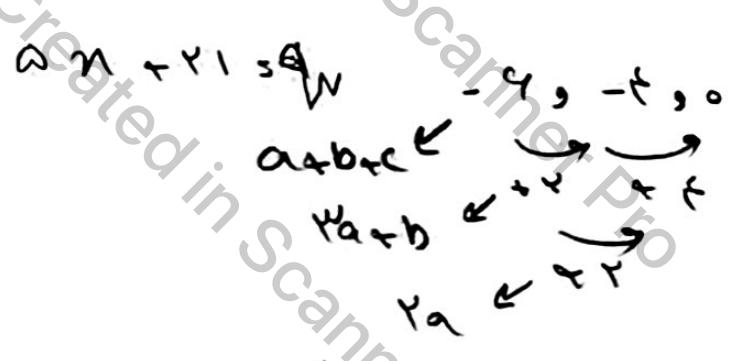
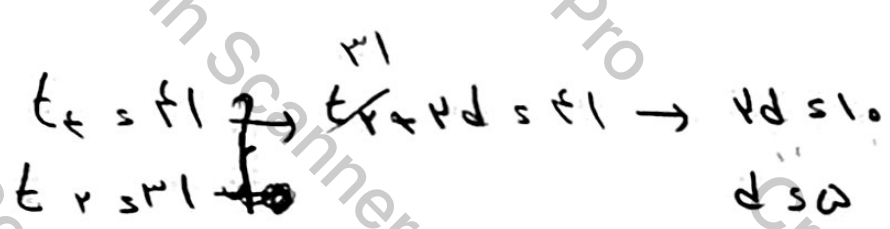


$$a_n = n^2 + n + c$$

$$b_n = \frac{1}{2}n^2 + \frac{1}{2}n + c$$

$$c_n = 0$$

$$A + AB = 2(-\frac{1}{2}) + 0(\frac{3}{2}) = 2$$



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

$$b_n = -1$$

$$c_n = -4$$

$$a_n + 41 = n^2 - n - 4$$

$$4n - n^2 = -41$$

$$n(4 - n) = -41 \rightarrow n = 49$$