

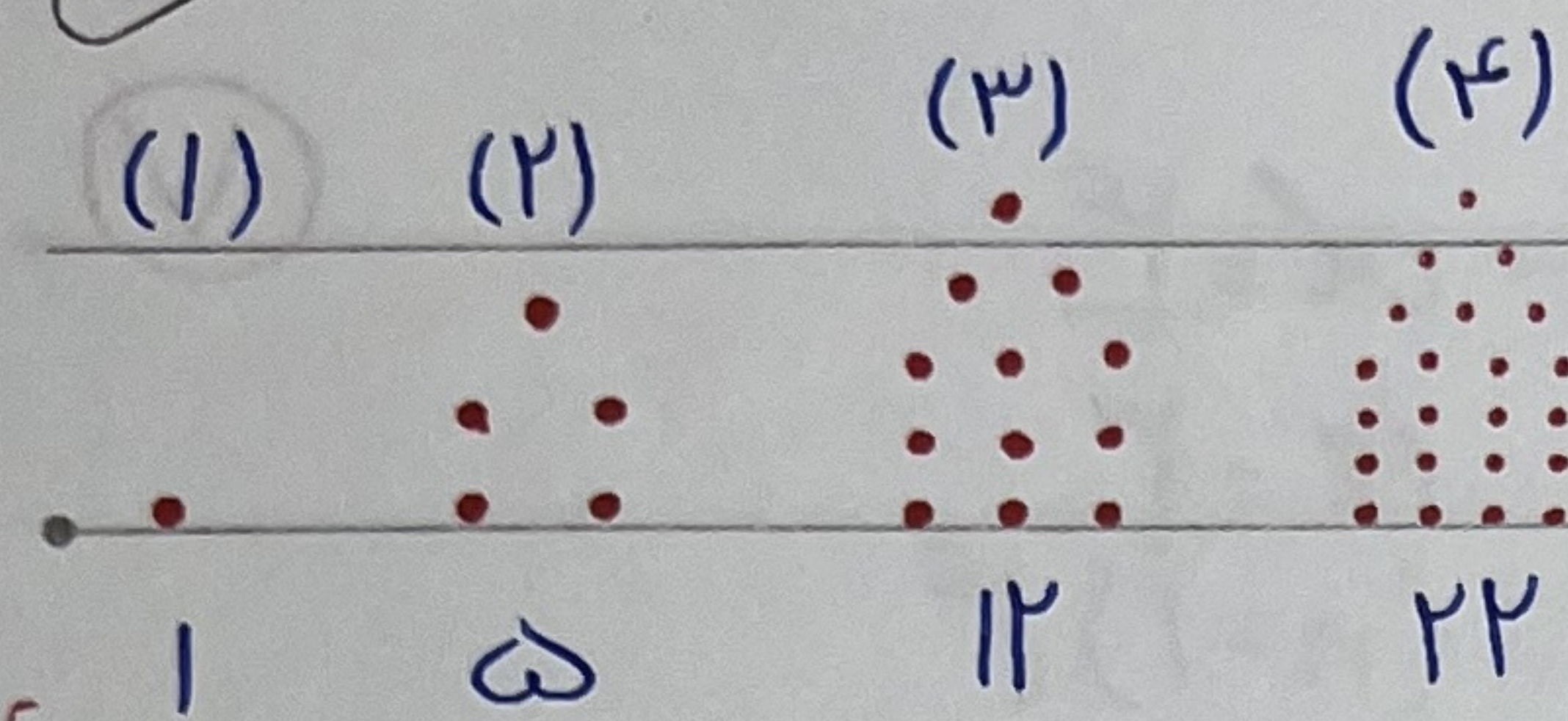
تکلیف ۱۱
Year:

Month: ۴/۷/۲۰

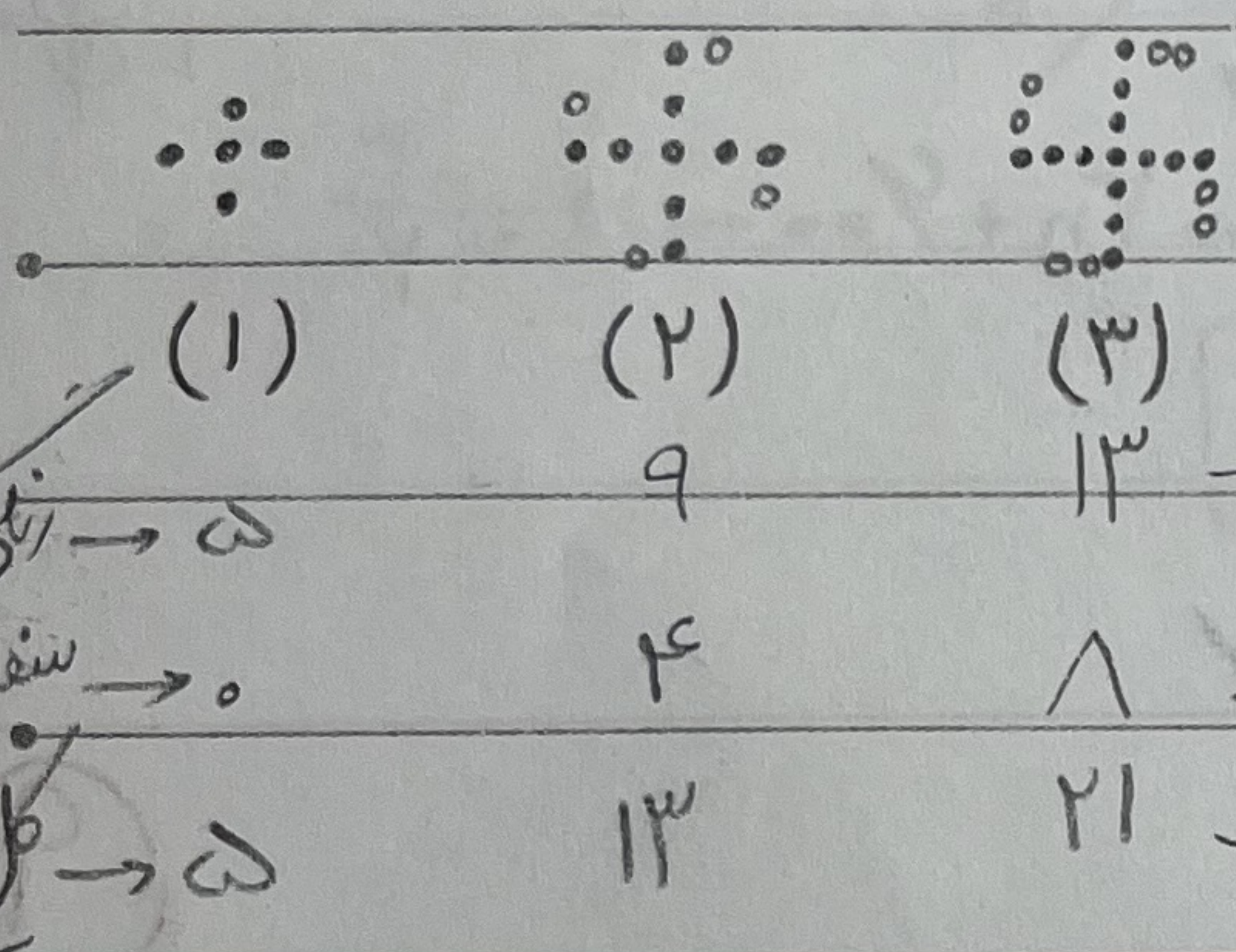
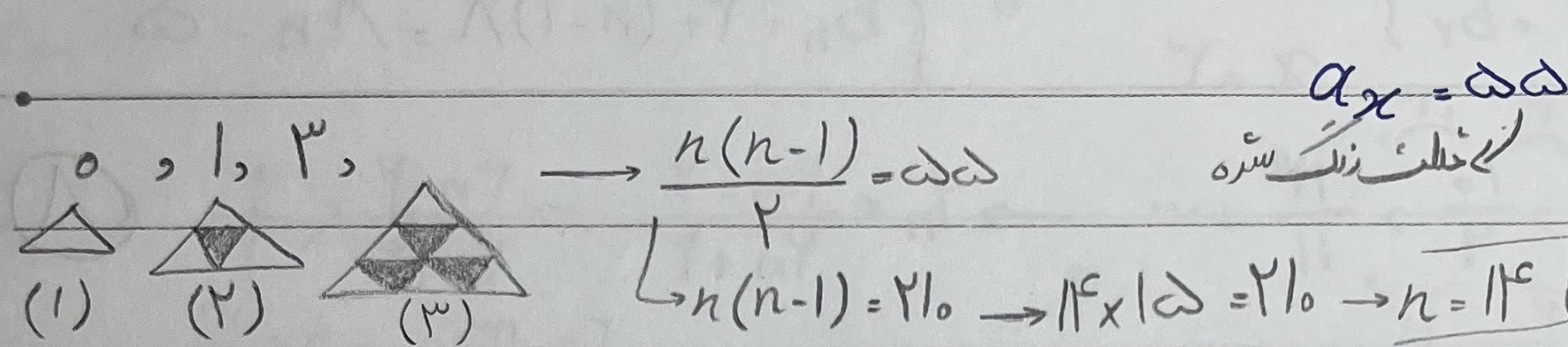
Day:

هم دختر A

Subject: سارینا زارع



$a_{10} = ?$
 $a_n = n^2 + \frac{n(n-1)}{2}$
 $\rightarrow 10^2 + \frac{10(10-1)}{2} = 100 + 45 = 145$



$a_n = 4n + 1 \rightarrow a_{11} = 4 \times 11 + 1 = 45$
 $a_n = 4n - 4 \rightarrow a_{11} = 4 \times 11 - 4 = 40$
 $a_n = 11n - 3 - a_{11} = 15$

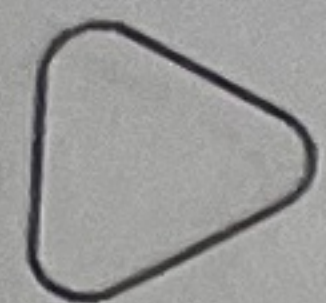
$a_n = \frac{(-1)^n}{n} \rightarrow -1, \frac{1}{2}, -\frac{1}{3}, \frac{1}{4}, -\frac{1}{5}, \frac{1}{6}, \dots$

هر چه بیشتر شش و عدد شش بزرگتر و اعداد مثبت بیشتر به سمت صفر می روند پس بزرگترین عدد $\frac{1}{n}$ را که چنان عدد ۱- است.

$b_n = (-3)^n - 7n \rightarrow a_3 = (-3)^3 - 7 \times 3 = -27 - 21 = -48$

$a_n = -5n + 22 \rightarrow a_k = -5k + 22 = -41 \rightarrow -5k = -63 \rightarrow k = 12$

$a_{10} - a_7 = 12$
 $a_9 - a_1 = ? \rightarrow d + 5d - d = 5d = 20$
 $d = 4$



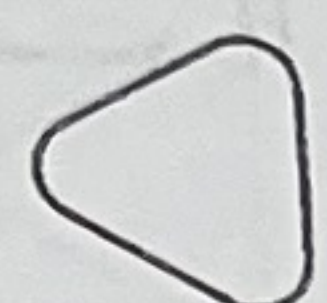
Year:

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Subject:



$$\left. \begin{aligned} a_r = V &\rightarrow a + d = V \\ a_r = 1\omega &\rightarrow a + 3d = 1\omega \end{aligned} \right\} \rightarrow 2d = 1\omega \rightarrow d = \frac{1\omega}{2}$$

✓

$$\left. \begin{aligned} a_1 = 3 = b_1 \\ a_3 = 3 + 2 \times \frac{1\omega}{2} = 11 = b_3 \end{aligned} \right\} \begin{aligned} 11 - 3 = 8 = d_b \\ a = 3 \end{aligned} \rightarrow b_n = 3 + (n-1)8 = 8n - 5$$

$$t_n = \frac{1}{\omega} \rightarrow \frac{1}{\omega} \rightarrow \frac{1}{\omega} \rightarrow \frac{1}{\omega} \rightarrow \dots \rightarrow t_n = \frac{1^n - 1}{1^n + 1} \rightarrow \frac{1^n - 1}{1^n + 1} < \frac{1}{2}$$

①

$$\frac{1^n - 1}{1^n + 1} - \frac{1}{2} < 0 \rightarrow \frac{2n - 1 - 1^n - 1}{2n + 2} \rightarrow \frac{2n - 1^n - 2}{2n + 2} < 0$$

$$\rightarrow 2n - 1^n - 2 = 0 \rightarrow n = \frac{1^n + 2}{2}$$

$$\text{اعداد زوج} \rightarrow \frac{1^n}{2}, \frac{1^n}{2} \rightarrow -1/\omega, 9/\omega \rightarrow \boxed{9 \text{ عدد}}$$

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

⑨

$$t_n = An^2 + Bn \rightarrow 2A = -1 \rightarrow A = -1/\omega$$

$$\rightarrow C = 0 \quad t_1 = 9 = -1/\omega \times 1^2 + B \times 1 \Rightarrow B = 10/\omega$$

$$3A + \omega B \rightarrow 3 \times (-1/\omega) + \omega \times (10/\omega) = \frac{30 - 3}{\omega} = \frac{27}{\omega}$$

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

⑩

$$t_1 = |x|^2 + bx - 9 = -9 \rightarrow b - \omega = -9 \rightarrow b = -1$$

$$t_n = n^2 - n - 9$$

$$a + d = 31 \rightarrow a - d = -31$$

$$a + 3d = 41$$

$$2d = 10 \rightarrow d = 5$$

$$a + 5 = 31 \rightarrow a = 26$$

$$a_n = 26 + (n-1)5$$

$$\omega n + 11 = n^2 - n - 9 \Rightarrow n^2 - 9n - 20 = 0$$

$$\Delta = (-9)^2 - 4 \times 1 \times (-20) = 81 + 80 = 161 \rightarrow \sqrt{\Delta} = 12$$

$$n = \frac{9 \pm 12}{2} \Rightarrow \begin{aligned} &9 \checkmark \\ &-3 \rightarrow \text{شماره جمله منفی نداریم} \end{aligned}$$

$$\boxed{\text{جمله 9م}}$$