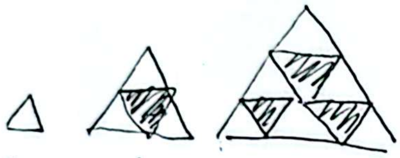
نام و نام خانوادگی ....هورا توسلی..... ۲۰ پاسخنامه تشریحی تکلیف شماره ..۱۱... کلاس دهم تیر B ....

 $0, 1, 5, 12, 22$; اختلاف‌ها: $1, 4, 7, 10$; $3, 3$; $a=\frac{3}{2}$, $c=0$; $5 = 6a + 2b \Rightarrow b = -\frac{1}{2}$; $t_n = \frac{3}{2}n^2 + \frac{-1}{2}n \Rightarrow t_{10} = 150 - 5 = 145$ ✓ (۲)	۱
 $0, 0, 1, 3$; اختلاف‌ها: $0, 1, 2$; 1 ; $a = \frac{1}{2}$, $c = 0$; $1 = 2 + 2b \Rightarrow b = -\frac{1}{2}$; $t_n = \frac{1}{2}n^2 - \frac{1}{2}n \Rightarrow 55 = \frac{1}{2}n^2 - \frac{1}{2}n = n(\frac{1}{2}n - \frac{1}{2}) \Rightarrow n = 11$ ✓ (۲)	۲
کل مهره‌ها: $5, 13, 21$; اختلاف‌ها: $8, 8$ $\Rightarrow t_n = 8n - 3 \Rightarrow t_{11} = 88 - 3 = 85$ مهره ✓ (۲)  مهره زنگی: $5, 9, 13$; اختلاف‌ها: $4, 4$ $\Rightarrow a_n = 4n + 1 \Rightarrow a_{11} = 44 + 1 = 45$ مهره زنگی ✓	۳
$a_n = \frac{(-1)^n}{n} \Rightarrow$ بزرگترین = n کوچکترین زوج $\Rightarrow 2 \Rightarrow a_2 = \frac{1}{2}$; کوچکترین = کوچکترین n فرد $= 1 \Rightarrow a_1 = \frac{-1}{1} = -1$; $a_2 - a_1 = \frac{1}{2} - (-1) = \frac{3}{2}$ ✓ (۲)	۴
$b_3 = a_k \Rightarrow -27 - 21 = -5k + 22 \Rightarrow -70 = -5k \Rightarrow k = 14$ ✓ (۲) ; $b_n = (-3)^n - 7n$; $a_n = -5n + 22$	۵

$t_n = an + b$

$t_{10} - t_7 = 12 \Rightarrow 10a + b - 7a - b = 12 \Rightarrow 3a = 12 \Rightarrow a = 4$

$t_6 - t_1 = ? = 6a + b - a - b = 5a = 20$ ✓ (2) 6

$a_n = dn + b \quad a_2 = 7 \quad a_4 = 15 \Rightarrow d = \frac{15 - 7}{2} = 4 \Rightarrow 4 \times 2 + b = 7 \Rightarrow b = -1$

$a_1 = b_1 \quad a_3 = b_2 \quad b_n = an + c = 8n - 5$ ✓

$3 = a + c \quad 11 = 2a + c \Rightarrow b_2 - b_1 = 2a + c - a - c = a = 11 - 3 = 8 \Rightarrow a = 8$ 7

$b_2 = 2a + c = 11 \Rightarrow 16 + c = 11 \Rightarrow c = -5$ (2)

صورت $\Rightarrow 4n - 2$

$t_n = \frac{2}{5}, \frac{6}{7}, \frac{10}{9}, \frac{14}{11} \Rightarrow \frac{4n-2}{2n+3} < \frac{3}{2} \Rightarrow 2(4n-2) < 3(2n+3)$

مخرج $\Rightarrow 2n + 3$

$\Rightarrow 8n - 4 < 6n + 9 \Rightarrow 2n < 13 \Rightarrow n < 6/5 \xrightarrow{n \in N} n = 1, 2, 3, 4, 5, 6$ (2) ✓ ۶ جمله 8

$t_n = 6, 9, 9, 6, 0 \quad A = -\frac{3}{2} \quad t_1 = -\frac{3}{2} + B = 6 \Rightarrow B = \frac{15}{2}$

$t_n = An^2 + Bn = -\frac{3}{2}n^2 + \frac{15}{2}n$

$3A + 5B = -\frac{9}{2} + \frac{75}{2} = \frac{66}{2} = 33$ ✓ (2) 9

$t_n = -6, -4, 0, \ldots \quad t_n = an^2 + bn + c \quad a = \frac{2}{2} = 1 \quad c = -6$

$t_2 = -4 = 4 + 2b - 6 \Rightarrow b = -1 \Rightarrow t_n = n^2 - n - 6$

$a_m = t_m \Rightarrow m = ? \Rightarrow n^2 - n - 6 = 5n + 21 \Rightarrow n^2 - 6n = 27$

$\Rightarrow n(n-6) = 27 \Rightarrow n = 9$ ✓ (2) 10

$a_n = dn + b = 5n + 21 \quad d = \frac{41 - 31}{2} = 5$

$a_2 = 31 \quad a_4 = 41$

$a_2 = 2 \times 5 + b = 31 \Rightarrow b = 21$