

نام و نام خانوادگی: ... جزایر ... پاسنامه تشریحی تکلیف شماره ۱۲ ... کلاس ... دهم پسر B

$t_n = 0, 9, 13, 17, \dots$ $a_n \leq f_{n+1}$ ✓ $a_{10} = f(10) + 1 = f_1$ ✓
(۲)

$t_n = 4, 10, 14, 18, \dots$ $s_{10} = \frac{n}{2} (2a_1 + (n-1)d)$
 $s_{10} = \frac{10}{2} (12 + 9 \times 4) = 240$ $s_{10} = 240$ ✓ (۱)
 $a_{10} + a_{11} + a_{12} + a_{13} = 2(a_1 + a_{14}) = 2(12 + 24d) = 2(12 + 24) = 72$

$1 + \sqrt{3}, 2, 3 - \sqrt{3}$ $d = \frac{a_m - a_n}{m - n} \rightarrow \frac{2 - 1 - \sqrt{3}}{2 - 1} = 1 - \sqrt{3}$ (۲)
 $a_n = a_1 + (n-1)d \rightarrow a_{10} = 1 + \sqrt{3} + (10-1)(1 - \sqrt{3})$
 $t_{10} - t_1 = a + 9d - a = 9d \rightarrow 9(1 - \sqrt{3}) = 9 - 9\sqrt{3}$ ✓

$3 \times 2 \times 10 = 60 = 2^x \times 3^y \rightarrow 4 \times 15 = 2^x \times 3^y$ (۱)
 $9 = 3^2 \rightarrow 3^2 \times 10 = 2^x \times 3^y$ $2^x + 2^y = 2 \times 15 \rightarrow 2^x = 2 \times 15 + 2^y$
 $\frac{x+y}{2} = 2 \rightarrow x+y = 4$ $\begin{cases} x+y=4 \\ x-y=1 \end{cases} \rightarrow \begin{matrix} x=1 \\ y=3 \end{matrix}$ $y = x+1$ $xy = 3$

$2x-4, 2x-1, 4x$ $2(2x-1) = 2x-4 + 4x \Rightarrow x = \frac{1}{2}$
 بازبینی: $-3, 0, 3$ $a_4 = 6$ ✓ (۲)
(۲)

$$a_n = 1, 5, 9, \dots \rightarrow a_n = 4n+1 \rightarrow a_0 = 1$$

$$b_n = 1, 5, 9, \dots \rightarrow b_n = 4n-1 \rightarrow b_0 = 5$$

$$C_n = 5, 11, 17, \dots \rightarrow C_n = 6n-1 \quad 9_{n-1} \leq 11$$

$n \leq 17 \rightarrow$ مستحيل

$$a_1 + a_2 + a_3 = 11 \quad a_1 + a_2 + a_3 = 10$$

$$a + a + d + a + 2d = 11 \rightarrow 3a + 3d = 11 \rightarrow \boxed{a + d = 11/3}$$

$$a + a + 2d + a + 3d = 10 \rightarrow 3a + 5d = 10 \rightarrow \boxed{a + 2d = 10/3}$$

$$\begin{cases} a + d = 11/3 \\ -a - d = -10/3 \end{cases} \rightarrow \begin{cases} d = 11/3 - 10/3 = 1/3 \\ a = 10/3 - 1/3 = 9/3 = 3 \end{cases}$$

(Y)

$$a_1 + a_2 + a_3 = 10 \quad a_1 + a_2 = 10$$

$$a + a + d + a + 2d = 10 \rightarrow 3a + 3d = 10 \rightarrow a + d = 10/3$$

$$a + 2d + a + 3d = 10 \rightarrow 2a + 5d = 10 \rightarrow a + 2.5d = 5$$

$$a_1 = a + 0d = 1 + 4(3) = 1 + 12 = 13$$

(Y)

$$a_1 \leq 11 \quad a_1 \leq 10 \quad d_a = \frac{a_m - a_n}{m - n} = \frac{11 - 1}{1 - 1} = \text{undefined}$$

$$a_n = 11 + (n-1)d$$

$$b_n = b_1 + d(n-1) = b_n = 11 + (n-1)(-2)$$

$$11 = 11 + (n-1)(-2) \rightarrow -11 = -2(n-1) \rightarrow 11 = 2(n-1) \rightarrow 11 = 2n - 2 \rightarrow 13 = 2n \rightarrow n = 6.5$$

(Y)

$$S_9 = 135 \quad S = \frac{n}{2}(a_1 + a_n)$$

$$S_9 = \frac{9}{2}(a_1 + a_9) \rightarrow \frac{9}{2}[2a_1 + 8d] = 9 \times \frac{9}{2}[2a_1 + 8d]$$

$$S_9 = \frac{9}{2}(a_1 + a_9)$$

$$\rightarrow \frac{9}{2}[a_1 + 8d] = 9 \times \frac{9}{2}[a_1 + 8d] \rightarrow a_1 + 8d = 9a_1 + 72d \rightarrow d = 8a_1$$

(Y)

$$\frac{a_1}{a_9} \rightarrow \frac{a_1 + 8d}{a_1 + 8d} = \frac{a_1 + 8(8a_1)}{a_1 + 64a_1} = \frac{65a_1}{65a_1} = 1$$

(Y)