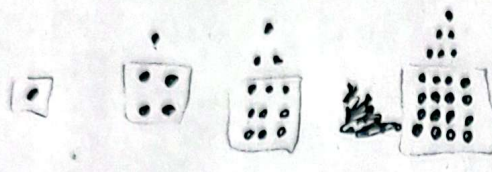


نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره کلاس ... (هم به هم) B.....



$$\Rightarrow t_n = n^2 + \frac{n(n-1)}{2} \Rightarrow t_{10} = 100 + \frac{10 \times 9}{2} = 145$$

$$\Rightarrow t_n = \frac{n(n-1)}{2} \Rightarrow n(n-1) = 110$$

$$\Rightarrow n = 11$$

$$t_n = 2n + 1 \Rightarrow t_{11} = 2 \times 11 + 1 = 23$$

$$t_{11} = 20 + 20 = 40$$

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

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

$$b_k = (-3)^k - 21 = -21$$

$$a_k = -2k + 22$$

$$\Rightarrow -21 = -2k + 22 \Rightarrow 2k = 43 \Rightarrow k = 21.5$$

$$t_{10} - t_v = q_1 + q_0 d - q_1 - q_0 d = 1 \times \Rightarrow v_0 d = 1 \times \Rightarrow d = \frac{1}{v_0}$$

$$t_4 - t_1 = q_1 + \omega d - q_1 = \omega d \Rightarrow \omega \times \frac{1}{v_0} = \frac{1}{v_0} \Rightarrow \omega = 1$$

6

$$\begin{aligned} & \boxed{1, 2, 3, 4, 5, 6, 7, 8, 9, 10} \Rightarrow d = \frac{10 - 1}{9} = \frac{9}{9} = 1 \\ & t_1 = 0 - 1 = -1 \\ & t_2 = 1 + 1 = 2 \end{aligned}$$

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$$b = 1, 11, 19, 27, \dots$$

$$b_n = 1n - 1$$

$$t_n = \frac{2n - 1}{1n + 1}$$

$$\frac{2n - 1}{1n + 1} = \frac{2}{1}$$

$$\Rightarrow 1n - 1 = 4n + 1 \Rightarrow n = -\frac{2}{3} \Rightarrow \text{no integer solution}$$

8

$$\begin{aligned} & t_n = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, \dots \Rightarrow a = -1/2 \Rightarrow t_n = -1/2 n^2 + bn + c \\ & \Rightarrow t_1 = -1/2 + b + c = 1 \\ & \Rightarrow t_2 = -2 + 2b + c = 4 \end{aligned}$$

$$b = 3/2$$

$$c = 1$$

$$\Rightarrow t_n = -1/2 n^2 + 3/2 n + 1 \Rightarrow A = -1/2, B = 3/2 \Rightarrow 4A + 3B = 1$$

9

$$t_n = -4, -2, 0, \dots \Rightarrow t_n = n^2 - n - 4$$

$$d = \frac{21 - 1}{2 - 1} = 20 \Rightarrow b_n = 20n + 1$$

$$20n + 1 = n^2 - n - 4 \Rightarrow n^2 - 21n - 5 = 0 \Rightarrow n(21 - n) = 5 \Rightarrow n = 22$$

$$b_{22} = 441 \quad t_{22} = 44$$

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