

$$t_n = 9n^2 + \frac{n(n-1)}{2}$$

$$t_{10} = 9 \cdot 10^2 + \frac{10 \cdot 9}{2} = 900 + 45 = 945$$

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صفت های زوج = ۰, ۱, ۳

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

$$t_n = \frac{n(n-1)}{2} = 44$$

$$n(n-1) = 88$$

$$n = 11$$

شکل ۱۱ ام

۲

$$t_5 = 5n - 4$$

$$t_m = 5n + 1$$

$$t_{11} = (5 \cdot 11) - 4 = 51$$

$$t_{11} = (5 \cdot 11) + 1 = 56$$

جمع کل مرده ها در شکل

۵ زدیم

$$t_5 + t_{11} = 51 + 56 = 107$$

۳

$$\frac{(-1)}{1}, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \dots$$

برای این فرمول

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

۴

$$b_n = (-3)^n - 21 = -27 - 21 = -48$$

$$a_k = -2k + 22 = -48$$

$$-2k = -70$$

$$0k = 70$$

$$k = 14$$

۵

$$t_6 - t_5 = 12 \rightarrow \cancel{\alpha} + 2d = \cancel{\alpha} - 4d = 12$$

$$t_5 - t_1 = 8$$

$$3d = 12 \\ d = 4$$

$$\alpha + 2d = \alpha = 8$$

$$2d = 2 \times 4 = 8$$

6

$$t_1 = 5$$

$$t_5 = 15$$

$$d = \frac{15 - 5}{4} = 2.5$$

$$\rightarrow d = 2.5$$

$$a_n = \alpha + (n-1)d$$

$$t_n = \alpha + r(n-1)$$

$$t_5 = 15 = \alpha + 4r \rightarrow \alpha = 15 - 4r$$

$$t_n = 15 + 5(n-1)$$

$$t_1 = 5, t_5 = 15$$

$$\rightarrow b_1 = 5, b_5 = 15$$

$$d_b = \frac{15 - 5}{4} = 2.5$$

$$b_n = \alpha + (n-1)d$$

$$b_1 = \alpha = 5$$

$$\alpha = 5$$

$$\rightarrow b_n = 5 + 2.5(n-1)$$

$$t_n = \frac{5n - 2}{2n + 3}$$

$$\frac{5n - 2}{2n + 3} < \frac{3}{2}$$

$$11n - 6 < 4n + 9$$

$$7n < 15$$

$$n < 2.14$$

$$n \leq 2$$

$$1, 2, 3, 4, 5, 6$$

بجای

1

$$t_1 = 4, A = B$$

$$t_5 = 9, 4A = 2B$$

$$\begin{cases} -2A + B = -12 \\ 4A + 2B = 9 \end{cases}$$

$$2A = -3$$

$$A = -\frac{3}{2}$$

$$A = B = 4$$

$$B = 4 + \frac{3}{2} = 5.5$$

$$3A + 5B = (3 \times -\frac{3}{2}) + (5 \times \frac{11}{2})$$

$$= -\frac{9}{2} + \frac{55}{2} = \frac{46}{2} = 23$$

9

$$t_5 = 31$$

$$t_9 = 41$$

$$t_n = 5n + 1$$

$$2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100$$

بجای

الگوی دهم

↓

$$-6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100$$

به قسم

عدد 3 و 4 و 5 و 6 و 7 و 8 و 9 و 10 و 11 و 12 و 13 و 14 و 15 و 16 و 17 و 18 و 19 و 20 و 21 و 22 و 23 و 24 و 25 و 26 و 27 و 28 و 29 و 30 و 31 و 32 و 33 و 34 و 35 و 36 و 37 و 38 و 39 و 40 و 41 و 42 و 43 و 44 و 45 و 46 و 47 و 48 و 49 و 50 و 51 و 52 و 53 و 54 و 55 و 56 و 57 و 58 و 59 و 60 و 61 و 62 و 63 و 64 و 65 و 66 و 67 و 68 و 69 و 70 و 71 و 72 و 73 و 74 و 75 و 76 و 77 و 78 و 79 و 80 و 81 و 82 و 83 و 84 و 85 و 86 و 87 و 88 و 89 و 90 و 91 و 92 و 93 و 94 و 95 و 96 و 97 و 98 و 99 و 100

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