

نام و نام خانوادگی کلاس پاسخنانه تشریحی تکلیف شماره ...

برای جمله عمومی طبق توان نوشت = جمله عمومی + اندی مربعی + اندی شش

$$a_n = 1, 5, 13, 25, \dots$$

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

$$a_{10} = \frac{3(10)^2 - 10}{2} = \frac{290}{2} = 145$$

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$$a_n = \frac{n(n-1)}{2} = a_n \rightarrow \dots, 3, 1, 0, 1, 3, 5, \dots$$

$$a_n = \frac{n(n-1)}{2} = \frac{n^2 - n}{2} \rightarrow \frac{n^2 - n}{2} = 55 \rightarrow n(n-1) = 110 \Rightarrow 11(10) = 110 \Rightarrow n = 11$$

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$$a_n = 1, 3, 5, 7, \dots \Rightarrow a_n = 2n - 1 \text{ (تعدد های فردی)} \Rightarrow \dots, 13, 15, 17, \dots \Rightarrow b_n = 2n + 1 \text{ (تعدد های فردی)} \Rightarrow \dots, 1, 3, 5, 7, \dots \Rightarrow c_n = 2n - 2 \text{ (تعدد های زوجی)}$$

$$a_n = 1, 3, 5, 7, \dots \Rightarrow b_n = 2n + 1 \Rightarrow c_n = 2n - 2 \Rightarrow \dots, 1, 3, 5, 7, \dots \Rightarrow d_n = 2n - 1 \text{ (تعدد های فردی)}$$

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$$a_n = 1(11) - 2 = 9 \text{ : تعداد های فردی}$$

$$b_n = 2(11) + 1 = 23 \text{ : تعداد های فردی}$$

$$c_n = 2(11) - 2 = 20 \text{ : تعداد های زوجی}$$

$$a_n = \frac{(-1)^n}{n}$$

در حساب کردن جمله اول از a_1 استفاده می شود.

$$\text{جمله اول} : \frac{(-1)^1}{1} = -1 \rightarrow \text{جمله اول}$$

$$\text{جمله دوم} : \frac{(-1)^2}{2} = \frac{1}{2} \rightarrow \text{جمله دوم}$$

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

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$$b_n \rightarrow b_n = (-1)^n - \sqrt{n} \Rightarrow (-1)^2 - \sqrt{2} = 1 - \sqrt{2} = -\sqrt{2} + 1$$

$$a_k \rightarrow a_k = -2k + 22 \Rightarrow -2k + 22$$

$$-2k + 22 = -18$$

$$-2k = -40 \Rightarrow k = 20$$

$$20k = 20 \times 20 = 400 \Rightarrow k = 10$$

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$$a_0 - a_1 = 11 ; a_1 - a_2 = ?$$

$$\rightarrow a_1 + 4d - (a_1 + 4d) = 4d - 4d = 0d = 11$$

$$a_1 - a_2 = a_1 + 4d - a_1 = 4d = 11 \Rightarrow d = \frac{11}{4}$$

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$$a_r = v \quad \left\{ \begin{array}{l} a_1, a_r = b_1, b_r \\ a_f = 1a \end{array} \right.$$

$$\rightarrow (a_1 + d = v) - 2 - d = d = -v$$

$$a_1 + 4d = 1a$$

$$rd = 1a \Rightarrow d = \frac{1a}{r} \Rightarrow a_1 = r \Rightarrow \langle a_n = r + (n-1) \frac{1a}{r} = \frac{r^2 + n - 1}{r} \rangle \Rightarrow a_1 = \frac{r^2 + 1 - 1}{r} = \frac{r^2}{r} = r, a_n = \frac{r^2 + n - 1}{r} = n$$

$$\rightarrow r, 11, \dots \Rightarrow b_n = 11n - a$$

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$$t_n = \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \dots$$

$$t_n = \frac{r_n - r}{r_n + r}$$

$$\frac{r_n - r}{r_n + r} < \frac{r}{r} \rightarrow 11n - r < 11n + r$$

$$r_n < 11r$$

$$n < \frac{11r}{r} = 11, 11 \Rightarrow n = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10$$

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$$t_n = 4, 9, 16, 25, \dots \Rightarrow r_n = An^2 + Bn + C$$

$$-rA = r \Rightarrow A = -\frac{r}{r}$$

$$\frac{r}{r} = \frac{r}{r} + b = 4 \rightarrow B = \frac{11r + r}{r} = \frac{12r}{r} \rightarrow B = 12$$

$$rA + 2B = r(-\frac{r}{r}) + 2(\frac{12r}{r}) = -\frac{r^2}{r} + \frac{24r}{r} = \frac{23r}{r} = 23r$$

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$$t_n = -4, -1, 2, \dots \Rightarrow r_n = an^2 + bn + c = n^2 - n - 4$$

$$r_n = r \Rightarrow a = 1$$

$$a = -4 = c, \text{ and } 1 + b - 4 - 4 = -4 \Rightarrow b = 1$$

$$b_1 = r_1 \rightarrow (b_1 + d = r_1) \rightarrow b_1 - d = -r_1$$

$$b_1 = r_1 \rightarrow b_1 + d = r_1$$

$$rd = 1a \Rightarrow d = a, a_1 = r_1 \Rightarrow b_n = r_1 + (n-1)a = \boxed{a_n + n}$$

$$\begin{aligned} n^2 - n - 4 &= a_n + 1 \\ (4n + 11 - n^2) - \\ n^2 - 4n - 11 &= 0 \\ (n-9)(n+2) &= 0 \end{aligned}$$

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