

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

برای جمله عمومی طبق توان گفت جمله عمومی = اندکی مربعی + اندکی مثلثی

$$a_n = 1, 5, 12, 22, \dots$$

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

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

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

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

$$a_n = 1, 5, 12, 22, \dots \Rightarrow a_n = n^2 - 3 \Rightarrow \text{جمله عمومی مثلثی}$$

$$a_n = 1, 5, 12, 22, \dots \Rightarrow b_n = a_{n+1} \Rightarrow \text{جمله عمومی مربعی} \Rightarrow c_n = a_{n-1} \Rightarrow \text{جمله عمومی مربعی}$$

$$a_n = 1(11) - 3 = 8$$

$$b_n = 4(11) + 1 = 45$$

$$c_n = 4(11) - 3 = 41$$

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

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

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

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

$$b_n \rightarrow b_n = (-1)^n - n \Rightarrow (-1)^n - n(1) = -1 - 1 = -2$$

$$a_k \rightarrow a_k = -k + 22 \Rightarrow -k + 22 = -18$$

$$-k + 22 = -18$$

$$-k = -40 \Rightarrow k = 40$$

$$+ak = +v_0 \Rightarrow k = \frac{v_0}{a} = 18 \Rightarrow k = 18$$

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

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$$\begin{aligned} a_1 + 4d - (a_1 + 4d) &= 9d - 4d = 5d = 11 \\ \frac{5d}{5} &= \frac{11}{5} \\ d &= \frac{11}{5} \end{aligned}$$

$$a_4 - a_1 = a_1 + 4d - a_1 = 4d = 4 \times \frac{11}{5} = \frac{44}{5}$$

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$$\begin{aligned} a_r &= v \\ a_r &= 1a \end{aligned} \Rightarrow a_1, a_r = b_1, b_r$$

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$$\Rightarrow (a_1 + d = v) - (a_1 = 1a) = d = v - 1a$$

$$a_1 + 4d = 1a$$

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

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

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

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$$t_n = \frac{kn - r}{rn + r}$$

$$\frac{kn - r}{rn + r} < \frac{r}{r} \Rightarrow kn - r < rn + r$$

$$kn < 11r$$

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

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$$t_n = 4, 9, 14, 19, \dots \Rightarrow r, a = An^2 + Bn + C$$

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$$-4A = r \Rightarrow A = \frac{-r}{4}$$

$$\frac{-r}{4} + B = 4 \Rightarrow B = \frac{17r}{4} = \frac{17}{4}r \Rightarrow B = \frac{17}{4}r$$

$$rA + 4B = r\left(\frac{-r}{4}\right) + 4\left(\frac{17r}{4}\right) = \frac{-r^2}{4} + 17r = \frac{67r}{4} = 16.75r$$

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

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$$ra = r \Rightarrow a = 1$$

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

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

$$b_1 = r_1 \Rightarrow b_1 + d = r_1$$

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

$$\begin{aligned} n^2 - n - 4 &= a_n + 1 \\ (4n + 17n - n^2) - \\ n^2 - 4n - 17 &= 0 \\ (n-9)(n+2) &= 0 \end{aligned}$$

نقطة تقاطع
الدالة مع
المحور
n = 9

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