

فاطمه حکیم الصبی

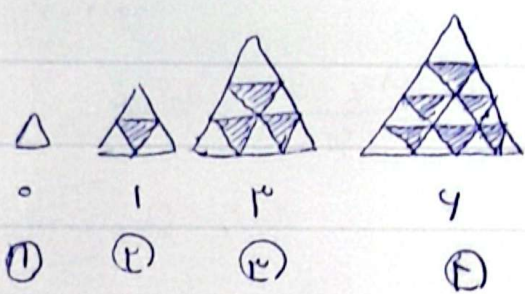
تکلیف ۱۱

دفعه پنجم

$$\begin{array}{cccc} 1^2 & 1^2 + \frac{1 \times 1}{2} & 1^2 + \frac{3 \times 1}{2} & 1^2 + \frac{6 \times 1}{2} \\ (1) & (2) & (3) & (4) \end{array}$$

سوال (۱)
۲

$$a_n = n^2 + \frac{n(n-1)}{2} \quad a_{10} = 10^2 + \frac{10 \times 9}{2} = 145$$



سوال (۲) $a_n = \frac{n(n-1)}{2}$

$$\frac{n(n-1)}{2} = 55 \Rightarrow n(n-1) = 110$$

$$\boxed{n = 11}$$

$$11 \times 10 = 110$$

سید	۴	۸
رنگی	۹	۱۳
	(۲)	(۳)

سوال (۳) $a_n = fn + 1$

سید: $fn - f$
 a_n

رنگی: $a_{11} = 4 \times 11 + 1 = 45$
سید: $a_{11} = 4 \times 11 - 4 = 40$

کل = $45 + 40 = 85$
 $45 + 40 = 85$

سوال (۴) $a_n = \frac{(-1)^n}{n}$ $a_1 = \frac{-1}{1} = -1$ $a_2 = \frac{1}{2} = \frac{1}{2}$ $a_3 = \frac{-1}{3} = -\frac{1}{3}$ $a_4 = \frac{1}{4}$

ن ↑ با خروج بزرگی شود در حالی که صورت ا و ا- است

بزرگترین: $n=1$
کوچکترین: $n=1$

$$a_2 - a_1 = \frac{1}{2} - (-1) = \frac{3}{2}$$

$$b_r = (-1)^r - v(1^r) = -2v - r1 = -f1$$

سوال ۵

$$a_k = -\omega k + r r = -f1 \Rightarrow -\omega k = -v_0 \Rightarrow k = 1^r \text{ و } 1^r$$

$$d = \frac{a_{10} - a_v}{10 - v} = f \quad \text{و} \quad \frac{a_{10} - a_{v_0}}{10 - v} = -f = d \quad \text{سوال ۶}$$

$$d = \frac{a_m - a_n}{m - n}$$

$$d = \frac{a_4 - a_1}{4 - 1} = f \Rightarrow a_4 - a_1 = f_0 \quad \text{و} \quad \frac{a_4 - a_1}{4 - 1} = -f \Rightarrow$$

$$a_4 - a_1 = -f_0$$

$$d = \frac{a_m - a_n}{m - n}$$

$$d = \frac{10 - v}{f - r} = \frac{1}{r} = f = \frac{a_f - a_r}{f - r} \Rightarrow a_r = a_1 + \frac{d}{r} \Rightarrow a_1 = r$$

$$a_r - a_1 = r d = f \times r = 1$$

$$d_b = 1 \rightarrow b_1 = r \Rightarrow b_n = A b_1 + d_b (n-1) \Rightarrow b_n = r + 1(n-1) = 1n - 1$$

~~$$\begin{matrix} 1^r & 1^r & 1^r & 1^r & 1^r \\ + & + & + & + & + \\ 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \end{matrix}$$~~

~~$$\begin{matrix} 1^r & 1^r & 1^r & 1^r & 1^r \\ + & + & + & + & + \\ 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \end{matrix}$$~~

~~$$\begin{matrix} 1^r & 1^r & 1^r & 1^r & 1^r \\ + & + & + & + & + \\ 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 \end{matrix}$$~~

سوال ۸

با سبب درص آخر

$$\begin{matrix} 9 & 9 & 9 & 9 & 9 \\ + & + & + & + & + \\ 1 & 1 & 1 & 1 & 1 \\ \hline 10 & 10 & 10 & 10 & 10 \end{matrix}$$

$$A = \frac{-r}{f}$$

$$C = 0$$

$$x_{10} = \frac{-r}{f} \times 1 + b \Rightarrow$$

$$B = \frac{10}{r}$$

$$3A + 5B = \frac{-9}{r} + \frac{50}{r} = \frac{41}{r} = 1^r$$

سوال ۹

$$d = \frac{a_m - a_n}{m - n}$$

$$d = \frac{r_1 - r_1}{r - r} = \frac{1 - 0}{r} = \frac{1}{r} = \omega$$

$$a_r = a_1 + d(r-1) = r_1 \Rightarrow a_1 = r_1 - \omega$$

$$a_n = a_1 + d(n-1) \Rightarrow a_n = r_1 - \omega + \omega n = r_1 + \omega(n-1)$$

$$a = \frac{r}{r} = 1$$

$$c = -9$$

$$t_n = n^r + bn - 9$$

$$t_1 = 1 + b - 9 \Rightarrow b = -1$$

$$t_n = n^r - n - 9$$

$$r_1 + \omega n = n^r - n - 9 \Rightarrow n^r - 4n - 17 = 0$$

$$n(n-9)(n+17) = 0$$

$$n = -17, 9$$

نستخرج $n \geq 1$ من $n(n-9)(n+17) = 0$

مثال 5.12

$$t_n = \frac{r}{\omega}, \frac{4}{v}, \frac{10}{q}, \frac{14}{11}, \dots$$

سؤال 1

$$t_n = \frac{rn - r}{rn + r} < \frac{r}{r} \xrightarrow{-\frac{r}{r}} \frac{rn - r - rn - r}{rn + r} = \frac{-2r}{rn + r}$$

$$\Rightarrow \frac{rn - 17}{rn + 4} < 0$$

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

$$\frac{-17}{r} < \frac{17}{r} \Rightarrow \{n \in \mathbb{N} \mid 1 \leq n \leq 4\}$$

$$\text{Scd} \Rightarrow \boxed{4, 12}$$