

زهره دینانی

۱,۷۵

۱

r_{n+1}

$$1 \leq r_{n+1} \leq 999$$

$$99 \leq r_n \leq 999$$

$$1 \leq r \leq 99$$

$$\downarrow$$

$$\rightarrow 1 \leq (r) + 1 \leq 100 \quad \text{میشود} \rightarrow 1 \leq (r) + 1 \leq 100$$

$$\sqrt{999-100} + 1 = 129$$

۱,۷۵

$$a_{n+1} = a_{n+9} + a_{n+1} = -9n + 15$$

$$a_{n+1} \quad a_{n+9} \quad a_{n+1}$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$a_1 + 9nd + nd \rightarrow 15 - 9n - 5 = -9n + 15$$

$$\downarrow$$

$$a_1 = 15$$

$$d = -9$$

$$\frac{15}{-9} + 9d = \frac{15}{-9} - 15 =$$

$$\frac{15}{-9} + 15d = \frac{15}{-9} - 135 =$$

۱

۱

$$a + 10d - a - 9d = 10d = 10 \quad d = \frac{10}{1}$$

$$a + 10d + a + 9d = 20$$

$$2a + 19d = 20$$

$$20 \times \frac{1}{19} = 10$$

$$2a = -20$$

$$a = -\frac{20}{2}$$

$$\frac{-20}{2} + 10 = \frac{-20}{2} + \frac{20}{2} = 0$$

۲

۳

$$10a + 10d = \frac{1}{2} (20a + 20d)$$

$$10a + 10d = 10a + 10d$$

$$10d = 10d$$

$$10d = 10d$$

$$a + 10d = \frac{a + 10d}{1} = a + 10d$$

۲

۴

$$\frac{10 + 10}{10} = 2$$

✓

۱

۲

۱

۱

۱

$$n=1 \rightarrow a_1 + a_2 + a_3 = 4 \quad \text{جواب}$$

$$n=2 \rightarrow a_1 + a_2 + a_3 = 0 \rightarrow a_1 - a_2 = -4$$

$$a_1 + a_3 - a_1 - a_2 = -4 \rightarrow a_3 = -4 \rightarrow d = -4$$

$$a_1 + a_2 + a_3 = 4 \rightarrow 4a_1 + d + a_3 + a_3 = 4 \rightarrow 4a_1 = 11 \rightarrow$$

$$a_1 = 4$$

$$a_1 + a_2 = a_1 + a_1 + 1d + a_3$$

$$4a_1 + 4a_3 = 4(4) + 4(-4) = -4$$

$$a_1 + a_2 = a_1 + a_2$$

$$r^n - 1 + r^{n+1} - r = r(r^{n+1})$$

$$r^n - r = r(r^{n+1}) - r^n$$

$$r^n - r^{n+1} - r = 0 \rightarrow r = 1$$

$$1 - 1 - r = 0 \rightarrow 1 - r = 0 \rightarrow r = 1 \rightarrow n = 2$$

$$b = -1 \quad \text{جواب}$$

$$\text{جوابات} \rightarrow \frac{r^n - 1}{r - 1} / \frac{r^{n+1} - r}{r - 1} = \frac{r(r^{n+1}) - r^n}{r - 1} = \frac{r^n(r - 1)}{r - 1} = r^n$$

$$t_1 - t_2 = (t_1 - t_2)(t_1 + t_2)$$

$$t_1 + t_2 = t_1 + t_2 = r t_1 \rightarrow \frac{r t_1 (t_1 - t_2)}{t_1} = r(t_1 - t_2)$$

$$t_1 - t_2 = t_1 + t_2 - t_1 - t_2 = 0 \rightarrow 0$$

$$n=2 \rightarrow t_1 = t_1 + 1 \rightarrow t_1 + a_1 = t_1 + 1 \rightarrow a_1 = 1$$

$$a_1 = 1(1) = 1$$

9

a_{n-3} واسطی حسابی درج سؤالت ہیں 32 صیدی a_{n-1} است!

$$a_{n-1} = \cancel{a_1} + (n-2)d = 32 \rightarrow (n-2)d = 31 \rightarrow (2n-1)d = 15$$

واسطی n صیدی $n+1$ است!

$$a_{n+1} = \cancel{a_1} + nd = 11 \rightarrow nd = 9$$

$$2nd - d = 15 \xrightarrow{nd=9} \begin{cases} d=3 \\ n=3 \end{cases}$$

10

$$a_n + a_{n+2} = a_9 + a_{17} \rightarrow n + n + 2 = 9 + 17$$

$$2n + 2 = 26 \rightarrow n = 12$$

$$a_1 = 3a_2 \rightarrow a_1 + 7d = 3(a_1 + d)$$

$$3a_1 + 7d = a_1 + 7d \rightarrow 2a_1 = -d \rightarrow a_1 = -d$$

$$a_{t+1} = 0 \rightarrow a_1 + (t-1)d = 0 \rightarrow td = 2d$$

$$t = 2$$

صیدی 12 صغابت

سوال 1

$$\begin{aligned} a_1 &= 3 \\ a_4 &= 41 \end{aligned} \rightarrow 3d = 38 \rightarrow d = 12.67$$

$$a_n = 3 \cdot 1 \rightarrow 3 + (n-1)12 = 3 \cdot 1$$

$$12n = 12 \rightarrow \underline{n = 1}$$