

17, 5

Date:

یلتا انوری - دهم 3

$$a_1 = 40 \quad a_r = 91 \rightarrow d = \frac{91 - 40}{r} = 16$$

سؤال 1:

$$a_n = 40 + (n-1)16 = 90 \rightarrow 40 + 16n - 16 = 90 \rightarrow 16n = 66 \rightarrow n = 4.125 \rightarrow n = 5$$

$$16n = 66 \rightarrow n = 4.125$$

$$100 \left(\frac{1}{2} \right)^n < 999 \rightarrow 97 \left(\frac{1}{2} \right)^n < 999 \rightarrow 13.1 \sim n < 14.2 \sim$$

سؤال 2:

$$142 - 14 + 1 = 129$$

$$a_{n+1} + a_{n+2} + a_{n+3} = -7n + 12$$

$$a_{n+1} + a_n = ?$$

سؤال 3:

$$\rightarrow a_n + d + a_n + 2d + a_n + 3d = -7n + 12 \rightarrow 3a_n + 6d = -7n + 12 \Rightarrow 3a_n = -7n + 12 - 6d \Rightarrow a_n = \frac{-7n + 12 - 6d}{3}$$

$$(-7n) \cdot 1 + (-7n) \cdot 2 + (-7n) \cdot 3 = -7n + 12 \rightarrow -28n = -7n + 12 \rightarrow -21n = 12 \rightarrow n = -\frac{4}{7}$$

$$d = 2$$

راهنمایین بزرگ نوشته شد

$$r^2 - 3, r^{n+1}, r^n - 1$$

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

سؤال 4:

$$\Rightarrow 1, 4, 1 \Rightarrow 1 + 4 + 1 = 6$$

$$a_{11} - a_1 = 5 \rightarrow a + 10d - a - 9d = 10d = 5 \rightarrow d = \frac{5}{10} = \frac{1}{2}$$

سؤال 5:

$$a_{11} + a_1 = 25 \rightarrow a + 10d + a + 9d = 2a + 19d = 25 \rightarrow 2a + 50 = 25 \rightarrow 2a = -25 \rightarrow a = -\frac{25}{2}$$

$$\rightarrow a_{11} = -\frac{25}{2} + 10 \times \frac{1}{2} = -\frac{25}{2} + 5 = -\frac{15}{2}$$

Scanned with

$$\frac{\omega}{r} (ra_1 + rd) = \frac{\omega}{r} \times \frac{1}{\mu} (ra_1 + rd) \rightarrow ra + rd = \frac{ra_1 + rd}{\mu} \rightarrow ra + rd = a + vd : \text{سؤال ٢}$$

$$ra - d = 0 \rightarrow \boxed{ra = d}$$

$$a_r = a + d \rightarrow a_r = ra$$

$$a_1 = a \Rightarrow \frac{a_r}{a_1} = \mu \quad \checkmark$$

$$r + v \quad nd = n(a) = \frac{r}{\mu}$$

$$t_n = t_{n-1} + 1\omega \quad (t_q - t_o) = (t_q - t_o) \left(\frac{t_v}{t_r} \right) = \frac{t_q - t_o}{r} = \frac{rd}{r} = d : \text{سؤال ٧}$$

$$\boxed{1,0} = r \times \omega = 1$$

$$t_r = t_1 + 1\omega$$

$$t_o = t_r + 1\omega$$

$$t_v = t_r + 1\omega = t_1 + 1\omega \rightarrow t_v - t_r = 1\omega \rightarrow \boxed{d = \omega}$$

$$t_y = t_r + 1\omega$$

$$t_q + t_o = t_v + t_v = r + v$$

$$d = \frac{b-a}{n+1} \rightarrow d = \frac{r + \sqrt{r} - r + 12\sqrt{r}}{13} = \frac{13\sqrt{r}}{13} = \sqrt{r} \quad \checkmark$$

$$\text{سؤال ٨}$$

$$d = \frac{r - r}{r_n - r} \rightarrow \frac{r_0}{r_n - r} = \frac{1\omega}{r_n - 1} \quad \text{علاقة } n+1 \rightarrow \text{علاقة } n$$

$$a_{n+1} = 11 \rightarrow a_1(n+1)d$$

$$\rightarrow r + (n) \times \frac{1\omega}{r_n - 1} = 11 \rightarrow \frac{1\omega n}{r_n - 1} = 9 \rightarrow rn - r = \omega n \rightarrow \boxed{n = 3} \quad \checkmark$$

$$\text{سؤال ٩}$$

$$a_n + a_{n+r} = a_r + a_{rv} \Rightarrow ra_1 + \underbrace{(n-1+n+d)}_{rn+r} = ra_1 + 11d$$

$$\text{سؤال ١٠}$$

$$a_n = r a_{\frac{n}{r}}$$

$$r_n - r = 11 \rightarrow \boxed{n = 11}$$

$$a_n = r a_r$$

$$a_1 + vd = ra_1 + 9d \rightarrow rd = -ra_1 \rightarrow \boxed{d = -a_1}$$

$$a_n = a_1 + (n-1)d \rightarrow a_1 + (n-1)(-a_1) = 0$$

$$\Rightarrow r - n = 0 \rightarrow \boxed{n = r}$$

Scanned with

$$a_1(1-n+1) = 0$$

سوال ۳

$$n=1 \rightarrow a_2 + a_3 + a_4 = 4 \quad \text{نکته}$$

$$n=2 \rightarrow a_3 + a_4 + a_5 = 0 \rightarrow a_5 - a_3 = -4$$

$$a_1 + a_5 - a_1 - 2d = -4 \rightarrow 2d = -4 \rightarrow d = -2$$

$$a_2 + a_3 + a_4 = 4 \rightarrow 3a_1 + d + 2d + 3d = 4 \rightarrow 3a_1 = 11 \rightarrow$$

$$a_1 = 4$$

$$a_{11} + a_1 = a_1 + a_1 + 10d + 10d$$

$$2a_1 + 20d = 2(4) + 20(-2) = -36$$

سوال ۴

$$a_3 + a_{13} = a_1 + a_1$$

$$r^n - 1 + r^{2n} - r = r(r^{n+1})$$

$$r^{2n} - r = r(r \times r^n) - r^n$$

$$r^{2n} - r \times r^n - r = 0 \rightarrow r^n = t$$

$$t^2 - ct - r = 0 \rightarrow t = 2 \rightarrow r^n = 2 \rightarrow n = 2$$

$$b = -1 \quad \text{عوض}$$

$$\text{حاصل} \rightarrow \frac{r^2 - 1}{r} / \frac{r^{2+1}}{r} / \frac{r(r)}{r - r} = 24$$