

Date:

.. ليلى النوري .. دهم ٣

$$a_1 = 10 \quad a_r = 91 \rightarrow d = \frac{91 - 10}{r} = 16$$

سؤال ١:

$$a_n = 10 + (n-1)16 = 90 \rightarrow 10 + 16n - 16 = 90 \rightarrow 16n = 96 \rightarrow n = 6$$

$$16n = 96$$

$$100 < 16n + 1 < 999 \rightarrow 99 < 16n < 998 \rightarrow 6.1875 < n < 62.375 \rightarrow n = 6, 7, \dots, 62$$

سؤال ٢:

$$\text{نقار: } 62 - 6 + 1 = 57$$

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

$$a_{n+1} + a_n = 2$$

سؤال ٣:

$$\rightarrow a_n + d + a_{n+1} + d + a_{n+2} + d = -7n + 12 \rightarrow 3a_n + 3d = -7n + 12 \Rightarrow 3a_n = -7n + 12 - 3d \Rightarrow a_n = \frac{-7n + 12 - 3d}{3}$$

$$(-7n + 12 - 3d) + (-7(n+1) + 12 - 3d) + (-7(n+2) + 12 - 3d) = -7n + 12 \rightarrow -21n - 9 = -7n + 12$$

$$d = 2$$

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

$$\Rightarrow \frac{r^{n+1}}{r^2 - 3} = \frac{(r^n - 1) + (r^2 - 3)}{r^2 - 3} = \frac{r^n - 1}{r^2 - 3} + 1 = \frac{r^n - 1}{r^2 - 3} + \frac{r^2 - 3}{r^2 - 3} = \frac{r^n - 1 + r^2 - 3}{r^2 - 3} = \frac{r^n + r^2 - 4}{r^2 - 3}$$

سؤال ٤:

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

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

سؤال ٥:

$$a_{11} + a_1 = 25 \rightarrow a + 10d + a + d = 2a + 11d = 25 \rightarrow 2a + 5 = 25 \rightarrow 2a = 20 \rightarrow a = 10$$

$$\rightarrow a_{11} = 10 + 10 \times \frac{5}{9} = 10 + \frac{50}{9} = \frac{140}{9}$$

Scanned with

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

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

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

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

$$t_n = t_{n-1} + 1\omega, \underbrace{(t_q - t_o)}_{t_v} = \underbrace{(t_q - t_o)}_{t_v} \underbrace{(t_q + t_o)}_{\frac{t_v}{r}} = \frac{t_q - t_o}{r} = rd : \text{سؤال ٧}$$

$$= r \times \omega = 1\omega$$

$$t_r = t_1 + 1\omega$$

$$t_o = t_r + 1\omega$$

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

$$t_y = t_r + 1\omega$$

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

سؤال ٨ :

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

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

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

سؤال ١٠ :

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

$$rn - r = 1\omega \rightarrow \boxed{n = 1}$$

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

$$a_n = r a_r$$

$$a_1 + vd = ra_1 + 1\omega d \rightarrow rd = -ra_1 \rightarrow \boxed{d = -a_1}$$

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

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

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

Scanned with