

B. خنتر

ماتریس

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$$t_n = \omega, 9, 17, 25, \dots$$

(سؤال 1) (الف)

$$t_n = \omega + k(n-1)$$

$$t_{10} = \omega + k(10-1) = 91$$

(ب)

$$t_n = 4, 10, 16, 22, \dots$$

(سؤال 2)

$$t_n = 4 + k(n-1) \rightarrow t_{10} = 4 + 10k = 44 \rightarrow S_{10} = \frac{10}{2}(4 + 44) = 245$$

(ج)

$$t_{19}, t_{20}, t_{21}, t_{22} \leftarrow k \times 4 = 36$$

(د)

$$t + 2d + t + 4d + t + 6d + t + 8d =$$

$$4t + 16d = (4 \times 4) + (16 \times 11) = 44 + 176 = 220$$

$$1 + \sqrt{10}, 1, 1 - \sqrt{10} \rightarrow d = 1 - \sqrt{10}$$

$$t_1 = 1 + \sqrt{10} \rightarrow t_{101} - t_{100} = t_1 + 100d - t_1 - 100d =$$

(سؤال 3)

$$10d \rightarrow 10(1 - \sqrt{10})$$

$$1 - 10\sqrt{10}$$

$$a_n = \omega^{r_m}, \omega^{r_m}, \omega^y$$

(سؤال 4)

$$\omega^{r_m} = \omega^{\frac{r_m}{p}} + \omega^y \rightarrow \omega^{r_m} = \omega^{\frac{r_m}{p}} + \omega^y$$

$$\omega^{r_m+1} = \omega^y \rightarrow r_m+1 = y$$

$$b_n = m, r, y \rightarrow r+y = p \rightarrow r + r_m+1 = p$$

$$r_m = r$$

$$m = 1$$

$$m \cdot y = 1 \times 1 = 1 \leftarrow r_m+1 = y \Rightarrow y = r$$

$$r_m - r, r_{m-1}, y_m, -$$

$$y_m = r_{m-1} + r$$

$$y_m = r_m + r \rightarrow \boxed{r_m = r} \Rightarrow t_1 = r \times \frac{1}{r} - r = \boxed{-r}$$

$$\hookrightarrow t_n = -r + r(n-1)$$

$$\hookrightarrow t_r = -r + r(r) = \boxed{4}$$

$$a_n = r, a_1, v, - \sim t_n = r + r(n-1)$$

$$\hookrightarrow t_{r_0} = r + r \times 1 = \boxed{r+1}$$

$$b_n = r, a_1, \lambda, - \sim t_n = r + r(n-1) \sim t_{r_0} = r + (r \times 1) = \boxed{2r}$$

$$\hookrightarrow \text{مسألة } d = r \times r = \boxed{4} \sim \omega, 11, 17, - \sim \omega + 4(n-1) = t_n$$

$$\boxed{6V} \leftarrow n \leq v \rightarrow \omega, 11, 17, 23, 29, 35, 41, 47, - \sim \omega + 4(n-1) \leq 104$$

$$\omega + 4(n-1) = t_n$$

$$a_1 - d, a_1 + d, a_1 + 2d, - \sim a_1 + a_r + a_{r_0} = 11 \rightarrow 3a_r = 11 \Rightarrow a_r = \boxed{v}$$

سؤال 5

$$a_1 + a_r + a_{r_0} = 10\omega \sim \underbrace{a_1 - d}_{a_1} + \underbrace{a_1 + d}_{a_{r_0}} + \underbrace{a_1 + 2d}_{a_{r_0}} = 10\omega \sim 3a_r + 3d = 10\omega$$

$$a_r = a_1 + d = v + r \times 1 = \boxed{13\omega}$$

$$a_r = v, a_1 = v - r \times 1 = -r \Rightarrow a_r - a_1 + a_1 = 3\omega - v - r = \boxed{v}$$

$$\boxed{a_1 = -r} \leftarrow \frac{v}{-r} = \frac{1}{r}$$

$$a_1 - d, a_1 + d, a_1 + 2d, - \sim a_1 + a_r + a_{r_0} = 10\omega \rightarrow a_r = \omega$$

سؤال 6

$$a_r + a_{r_0} = 2\omega \sim \underbrace{a_r + r_0 d}_{a_r} + \underbrace{a_r + r_0 d}_{a_{r_0}} = 2\omega \sim 10 + \omega d = 2\omega \sim \boxed{d = 10}$$

$$t_{10} = r + r(9) = \boxed{18} \leftarrow t_n = a_1 + d(n-1) \leftarrow a_1 = \omega - r = \boxed{2}$$

$$\times \frac{r}{9} \left(\frac{9}{v} (a_1 + a_9) = \frac{r}{v} (a_1 + a_{r_0}) \right)$$

$$a_1 + a_9 = 3a_1 + 3a_{r_0}$$

$$\underbrace{a_1 + a_1 + \omega d}_{3a_1} = \underbrace{3a_1 + 3a_1 + 9d}_{9a_1} \sim r d = 3a_1 \rightarrow \frac{a_{r_0}}{a_v} = \frac{a_1 + 19d}{a_1 + 9d} = \frac{39a_1}{13a_1} = \boxed{3}$$

سؤال 7

$$\textcircled{1} \begin{cases} a_1 = 11 \\ a_v = 3\omega \end{cases} \sim \frac{11}{a_1} + 9d = 3\omega \sim \boxed{d = 1} \Rightarrow a_{r_0} = a_1 + 9d = 20$$

$$\textcircled{2} \begin{cases} a_1 = 13\omega \\ a_{r_0} = 23\omega \end{cases} \sim a_{r_0} = a_1 + r d = 23\omega \Rightarrow r d = 10\omega \Rightarrow d = -\omega \Rightarrow 13 = 3\omega - \omega(n-1) \Rightarrow 13 = 3\omega - \omega n + \omega \Rightarrow 13 = 2\omega - \omega n \Rightarrow 13 = \omega(2-n) \Rightarrow \omega = 13, n = 4$$