

((بسم الله الرحمن الرحيم))

$$1) K_{n+1} \rightarrow K(1.) + 1 = K$$

$$2) K_{n+1} \begin{cases} n_1 = 9 \\ n_2 = K \end{cases}$$

$$S = \frac{1}{2}(a_1 + a_n) = \frac{1}{2}(9 + K) = 24$$

← الف

$$K_1, \dots, K_n \begin{cases} n_{K_1} = 111 \\ n_{K_n} = 13 \end{cases}$$

$$S = \frac{K}{2}(111 + 13) = 444$$

← ب

$$3) d = 1 - \sqrt{3} \rightarrow a_{10} - a_{16} = (1 + Kd) - (1 + 24d) = 2d \rightarrow 2(1 - \sqrt{3}) = 2 - 2\sqrt{3}$$

$$4) \omega^{1d}, \omega^{2d} + \omega^{3d} + \omega^{4d} + \omega^{5d} + \omega^{6d} + \omega^{7d} + \omega^{8d} + \omega^{9d} + \omega^{10d} + \omega^{11d} + \omega^{12d} + \omega^{13d} + \omega^{14d} + \omega^{15d} + \omega^{16d} + \omega^{17d} + \omega^{18d} + \omega^{19d} + \omega^{20d} + \omega^{21d} + \omega^{22d} + \omega^{23d} + \omega^{24d} + \omega^{25d} + \omega^{26d} + \omega^{27d} + \omega^{28d} + \omega^{29d} + \omega^{30d} + \omega^{31d} + \omega^{32d} + \omega^{33d} + \omega^{34d} + \omega^{35d} + \omega^{36d} + \omega^{37d} + \omega^{38d} + \omega^{39d} + \omega^{40d} + \omega^{41d} + \omega^{42d} + \omega^{43d} + \omega^{44d} + \omega^{45d} + \omega^{46d} + \omega^{47d} + \omega^{48d} + \omega^{49d} + \omega^{50d} + \omega^{51d} + \omega^{52d} + \omega^{53d} + \omega^{54d} + \omega^{55d} + \omega^{56d} + \omega^{57d} + \omega^{58d} + \omega^{59d} + \omega^{60d} + \omega^{61d} + \omega^{62d} + \omega^{63d} + \omega^{64d} + \omega^{65d} + \omega^{66d} + \omega^{67d} + \omega^{68d} + \omega^{69d} + \omega^{70d} + \omega^{71d} + \omega^{72d} + \omega^{73d} + \omega^{74d} + \omega^{75d} + \omega^{76d} + \omega^{77d} + \omega^{78d} + \omega^{79d} + \omega^{80d} + \omega^{81d} + \omega^{82d} + \omega^{83d} + \omega^{84d} + \omega^{85d} + \omega^{86d} + \omega^{87d} + \omega^{88d} + \omega^{89d} + \omega^{90d} + \omega^{91d} + \omega^{92d} + \omega^{93d} + \omega^{94d} + \omega^{95d} + \omega^{96d} + \omega^{97d} + \omega^{98d} + \omega^{99d} + \omega^{100d}$$

$$\Delta y = \Delta^{Kx+1} \rightarrow y = 2x + 1 \text{ ①}$$

$$\frac{x+y}{2} = 2 \rightarrow x+y = 4 \text{ ②}$$

$$xy = 3, y = 3, x = 1 \leftarrow \text{①, ②}$$

$$5) 2(2d+1) = 18d - 4 \rightarrow d = \frac{1}{2}$$

$$-3 > 0 > 3$$

$$a_n = 2n - 4 = 4$$

$$6) 4n-1 \leq K$$

$$n \leq 7$$

$$2n \begin{cases} n_1+1 \rightarrow K1 \checkmark \\ n_2-1 \rightarrow 09 \end{cases}$$

$$7) a_1-d, a_2, a_3+d \rightarrow 3a_2 = 21 \rightarrow a_2 = 7$$

$$30-7 = 21 + a_1(-11) = \frac{V}{-11} = \frac{1}{11}$$

$$8) a_1 + a_2 + a_3 = 18 \rightarrow 3a_2 = 18 \rightarrow a_2 = 6$$

$$\begin{matrix} a_1 + a_2 = 18 \\ a_2 + a_3 = 18 \end{matrix} \rightarrow \begin{matrix} 1. + 5d = 18 \\ d = 3 \end{matrix}$$

$$a_{10} = a_2 + 8d = 6 + 24 = 30$$

$$9) \frac{1}{2}(a_1 + a_4) = 9 \left(\frac{1}{2}(a_1 + a_4) \right) \rightarrow a_1 + a_4 = 2a_2 + 3a_3 \rightarrow 2a_1 = a_4 - 3a_3$$

$$2a_1 = a_1 + 3d - 3(a_1 + 3d) \rightarrow 4d = 6d \rightarrow d = \frac{3}{2}$$

$$10) d = \frac{38-11}{4} = 7 \quad a_n = 11 + 7 \rightarrow a_K = 23$$

$$d = \frac{33-21}{2} = 6 \quad a_n = -5n + 33$$

$$11) \underbrace{1, 2, 3, \dots, 11, 12, 13, \dots, 19, 20, 21, \dots, 29, 30, 31, \dots, 39, 40, 41, \dots, 49, 50, 51, \dots, 59, 60, 61, \dots, 69, 70, 71, \dots, 79, 80, 81, \dots, 89, 90, 91, \dots, 99, 100}_{\text{100 دات حسابي}}$$

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