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$$t_n = k_n + 1$$

$$b) (f_{10}) + 1 = 41$$

$$a) S_{10} = \frac{n}{2} (a_1 + a_n) = \frac{10}{2} (4 + 41) = 225$$

$$t_n = 2(120 + 118) = 476$$

$$= 118$$

$$t_{11} = (f_{10}) + 1 = 118$$

$$t_{12} = (f_{11}) + 1 = 120$$

$$4\sqrt{2}, 2, 2-\sqrt{2}, \dots \rightarrow d = 1-\sqrt{2}$$

$$t_{11}, t_{12}, t_{13} \rightarrow 2d = 1 - \sqrt{2} = 2 - 2\sqrt{2}$$

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$$a_n = \omega^{2n} \cdot 1 \cdot 1 \cdot \omega^{2n} + \omega^2$$

$$\omega^{2n+1} = \omega^2$$

$$\frac{2n+1}{2} = 2 \rightarrow 2n+1 = 4$$

$$b_n = 1 = \frac{n+2}{2} \rightarrow n+2 = 2$$

$$n+2 = 2 \rightarrow n = 0$$

$$n = 1$$

$$2n-1, 2n-1, 4n, \dots$$

$$2n+1 = 4n \rightarrow 2n = 1 \rightarrow n = \frac{1}{2}$$

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$$t_1 = \frac{4}{2} + 2 = 4$$

$a_n = 2n+1 \rightarrow \{x\} + 1 = f$
 $b_n = 2n-1 \rightarrow \{x\} - 1 = g \rightarrow 4n-1 = 2g \rightarrow 4n = 4g \rightarrow n = g$
 $4n-1 \rightarrow f = 4n-1 \rightarrow 4n = f \rightarrow n = \frac{f}{4}$
 $(a_n \text{ جمله } n) \cap (b_n \text{ جمله } n) = a_n = b_n = 17$

$a_1 + a_2 + a_3 = 21$
 $a_1 - d + a_2 + a_3 = d$
 $2a_2 - 21 \rightarrow a_2 = 17$
 a_1, a_2, a_3
 $a_1 - d + a_2 + a_3 + d$
 $2a_2 = 10$
 $a_2 = 5$
 $a_1 = -11$
 $20 - 17 - 21 = 17$
 $\frac{17}{-11} = -\frac{1}{11}$

$a_1 + a_2 + a_3 = 10 \rightarrow a_1 + a_1 + d + a_1 + 2d = 10 \rightarrow 3a_1 + 3d = 10$
 $a_1 + d = 10$
 $a_1 + a_3 = 10 \rightarrow a_1 + 2d + a_1 + d = 10$
 $2a_1 + 3d = 10$
 $a_{10} = a_1 + 9d = 1 + 18 = 19$
 $\begin{cases} 3a_1 + 3d = 10 \\ 2a_1 + 3d = 10 \end{cases}$
 $\frac{a_1}{d} = \frac{1}{1}$

$\frac{9}{1} (a_1 + a_9) = \frac{9}{1} (a_1 + a_9) \rightarrow \frac{9}{1} a_1$
 $\frac{9}{1} a_1 + \frac{9}{1} a_9 = \frac{18}{1} a_1 + \frac{18}{1} a_9$
 $9a_1 = \frac{9}{1} a_9 - \frac{18}{1} a_9$
 $9(\frac{1}{1} a_9 - \frac{2}{1} a_9) = 9a_1$
 $\frac{1}{1} (a_1 + 9d) - \frac{2}{1} (a_1 + 9d) = a_1$
 $\frac{9}{1} + 9d - \frac{2}{1} a_1 - 18d = a_1 \rightarrow 9a_1 = d$

$t_1 = 11$
 $t_2 = 10$
 $11 + 9d = 10$
 $9d = 10 - 11 \rightarrow d = -1 \rightarrow t_2 = t_1 + d$
 $t_1 = 11$
 $t_2 = 10 \rightarrow t_1 + 9d = 10 \rightarrow 9d = -1 \rightarrow d = -1$
 $a_1 = \frac{d}{1}$
 $\frac{a_1}{a_2} = \frac{a_1 + 9d}{a_1 + 9d} = 1$
 $\frac{11}{1} = \frac{11}{1}$
 $\frac{11}{1} = \frac{11}{1}$

$d = \frac{b-a}{n+1} \rightarrow -1 = \frac{11-11}{n+1} \rightarrow -1(n+1) = -10 \rightarrow -1(n+1) = -10$
 $n+1 = 0 \rightarrow n = -1$