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آرین شفاei دهیم کاسیران

SUBJECT:

Page: ()

Year:

Month:

Day:

$$a, 9, 13, 17$$

$$\underbrace{a+9}_{14} + \underbrace{13+17}_{30}$$

$$d, 4$$

(٢)

$$e_{n+1} \quad (الف)$$

$$\checkmark (2 \times 10) + 1 \times 21 \quad (ب)$$

$$t_n = f_n + 2 \quad S_{10} = \frac{10}{2} (f_1 + f_{10}) = 5(f_1 + 24) = 245$$

(٢) (الف)

$$f_{10} = 24$$

$$f_1 = 9$$

(٢)

$$f_1 + f_2 + \dots + f_{10} = \frac{10}{2} (9 + 24) = 5 \times 33 = 165$$

(ب)

$$\frac{1}{2} (9 \times 4) + 2 \quad \frac{1}{2} (24 \times 4) + 2$$

(٣)

$$1 + \sqrt{3}, 2, 3 - \sqrt{3}$$

$$\underbrace{1 + \sqrt{3}}_{\sqrt{3}+1} + \underbrace{3 - \sqrt{3}}_{\sqrt{3}+1}$$

$$d = \sqrt{3} + 1$$

$$f_1 + 2d, t_{10}$$

$$2d = 2(\sqrt{3} + 1)$$

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$$\text{if } n \in \mathbb{N} : a_n = 2a, 5a, \dots \quad \text{if } n \in \mathbb{N} : a_n = 2a, 5a, 12a$$

$$b_n \in 1, 2, 3 \quad n \in \mathbb{N} : b_n = 1, 2, 3$$

$$\checkmark, n \in \mathbb{N}$$

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$$2x - 2, 2x - 1, 9x, t_x$$

$$\underbrace{2x - 2}_{+2} + \underbrace{2x - 1}_{+2}$$

$$\left. \begin{matrix} -2, 0, 2, \dots, t_x \end{matrix} \right\} \quad \checkmark$$

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$$\therefore 2x - 1 + 2 = 9x \Rightarrow f_{2x} = 2 \Rightarrow x = 0/5$$

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$$a_n: 3, 6, 9, 12, 15, 18, 21, 24 \rightarrow a_1 = 3$$

$$b_n: 2, 4, 6, 8, 10, 12, 14, 16 \rightarrow b_1 = 2$$

$$c_n: 1, 4, 9, 16, 25 \rightarrow c_n = n^2$$

$$b_{n-1} < f_1 \Rightarrow b_n < f_2 \Rightarrow n \leq 5 \rightarrow$$

$$\boxed{\begin{matrix} n \leq 5 \\ \checkmark \end{matrix}}$$

$$a_1 + a_2 + a_3 + \dots + a_n = a_1 + a_2 + a_3 \Rightarrow a_1 + a_2 = 14$$

$$\therefore a_1 + 2d - a_1 = 14 \Rightarrow d = 7$$

$$\therefore 3a_1 + 3d = 14 \Rightarrow 3a_1 = 14 - 21 = -7$$

$$\therefore a_1 = -7/3$$

$$\therefore a_1 + 2d = a_1 - d + a_1 + d = a_1 + d = 14 \Rightarrow \frac{1}{-7/3} = \frac{1}{-7/3}$$

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(٧)

$$a_1 + a_2 + a_3 = 14 \Rightarrow 3a_1 + 3d = 14 \Rightarrow 10/3d = 24/3$$

$$a_1 + a_2 = 14 \Rightarrow 2a_1 + 2d = 14 \Rightarrow 5/3d = 24/3$$

$$\therefore 3a_1 + 10/3d = 24/3 \Rightarrow a_1 = 2$$

$$t_n, f_{n-1}$$

$$t_{10} = 19$$

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Senobar



$$\frac{1}{x} (a_1 + nd) = \frac{1}{x} (a_1 + nd) \quad \left\{ \begin{array}{l} a_1, a_1 + d, a_1 + 2d, \dots, a_1 + (n-1)d \end{array} \right. \quad (9)$$

$$a_1 + nd = a_1 + nd$$

$$x(a_1 + nd) = x a_1$$

$$d = a_1$$

$$d_a = \frac{2f}{4} = f, a_n = 1, 2, 3, \dots, 13 \quad (10)$$

$$b_n = 13$$

$$d_b = \frac{13 - 1}{n-1} = \frac{-12}{n-1}, b_f = 1 + \frac{-12}{n-1} = 13, 12 = \frac{12}{n-1}, n = 4$$

$$b_1 = 13, b_4 = 12 \quad \left\{ \begin{array}{l} 13, 12, 11, 10 \end{array} \right. \quad (11)$$