

$$t_n = 5, 9, 13, 17, \dots$$

$$\underbrace{\quad}_{+2} \quad \underbrace{\quad}_{+2} \quad \underbrace{\quad}_{+2}$$

$$f_{n+1} \quad (\text{الف})$$

$$f_{x10+1} = 21 \quad \text{ب}$$

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$$t_n = 4, 10, 16, 18$$

$$\underbrace{\quad}_{+2} \quad \underbrace{\quad}_{+2}$$

$$f_{n+2}$$

$$n_{10} = f_{x10+2} = 22$$

$$n_1 = 4$$

$$S = 10 \times \frac{f_1}{\frac{f_1}{x} + 4} = 24 \quad (\text{الف})$$

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$$S = \frac{n}{r} \times [r a_n + (n-1)d] = \frac{4}{2} \times [2 + (4-1) \times 2] = 14 \quad (\text{ب})$$

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

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

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

$$n_{20} - n_{20} = r d = 2(1 - \sqrt{3}) = 2 - 2\sqrt{3}$$

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$$a_n = 5, 3x5, 5^2, \dots$$

$$5^2, 3x5, 5^2 \rightarrow 25, 15, 25 \quad \checkmark$$

$$b_n = 1, 2, 4$$

$$\frac{a+y}{2} = 2 \rightarrow a+y=4$$

$$\text{if } a=1$$

$$y=3$$

$$ay = 1 \times 3 = 3$$

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$$29x-5, 29x-1, 49x, \dots$$

$$\underbrace{\quad}_{+2} \quad \underbrace{\quad}_{+2}$$

$$d=2$$

$$a_2 = a_1 + 2d$$

$$a_2 = -3 + 4 = 1$$

$$f_{an+1} = 2 \rightarrow f_{an} = 2$$

$$\rightarrow n = \frac{a}{2} = \frac{1}{2}$$

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$t_n = r_{n+1}$ $a_n = \frac{r_1}{+r} \frac{a_1}{+r} V, 9, 11, 13, 15, 17, 19 \rightarrow n_{r_1} = 11$ $b_n = \frac{r_1}{+r} \frac{a_1}{+r} 1, 11, 12, 14, 15$ $\frac{a_1, 11, 14}{+4 \quad +4} \rightarrow 4n - 1 \leq 11$ $4n \leq 12 \quad n \leq 3 \rightarrow n = 3$	6
$a_r - d + a_r + a_r + d = 11 \rightarrow a_r = 11$ $a_r - r, a_r, a_r + d = 1.5 \rightarrow a_r = \frac{1.5}{r} = 1.5$ $a_r - a_r = d \rightarrow 1.5 - 1.5 = 0$ $\frac{a_r - a_r}{r} = \frac{a_1 - a_1}{r} = 0$	7
$a_r - d, a_r, a_r + d = 15 \rightarrow a_r = 15$ $a_r, a_r = 15$ $a_r + d, a_r + d$ $15 + d = 15 \rightarrow d = 0$	8
$S_n = \frac{n}{r} (ra + (n-1)d)$ $S_1 = 1 \cdot S_1$ $a_1 = a + 1d$ $a_1 = a + 1d = 15$ $\frac{a_1}{a_1} = \frac{15}{15} = 1$	9
$a_1 = 11$ $a_1 = 15 \rightarrow 4d = 15 - 11 = 4 \rightarrow d = 1$ $11, 12, 13, \dots$ $a_1 = 11, a_1 = 15 \rightarrow a_1 = 11 + 4d = 15$ $a_1 = 11, a_1 = 15 \rightarrow a_1 = 11 + 4d = 15$	10