

۱۷, ۷, ۵

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

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

$$f_{n+1} \quad \text{ان}$$

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$$f_{x1.} + 1 = 21 \quad \text{ب}$$

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

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

$$f_{n+2}$$

$$n_{1.} = f_{x1.} + 2 = 22$$

$$n_i = 4$$

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

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

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

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

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

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

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$$a_n = 5, 3x, 5^{2n}, 5^y$$

$$5^2, 5x5, 5^5 \rightarrow 25, 5x25, 125 \quad \checkmark$$

$$b_n = x, 2, y$$

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

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

$$xy = 1 \times 3 = 3$$

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$$29x - 7, 29x - 1, 49x, \dots$$

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

$$d = 2$$

$$a_z = a_1 + 20d$$

$$a_z = -3 + 40 = 37$$

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

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

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$t_n = r_{n+1}$ $a_n = \frac{r_1}{r_1+r} \Delta, \frac{r_2}{r_1+r} V, \frac{r_3}{r_1+r} 11, \frac{r_4}{r_1+r} 13, \frac{r_5}{r_1+r} 15, \frac{r_6}{r_1+r} 17 \rightarrow n_r = 11$ $b_n = \frac{r_1}{r_1+r} \Delta, \frac{r_2}{r_1+r} 11, \frac{r_3}{r_1+r} 12, \frac{r_4}{r_1+r} 14, \frac{r_5}{r_1+r} r_0$ $\frac{\Delta}{r_1+r}, \frac{11}{r_1+r} \rightarrow 4n-1 \leq 11$ $4n \leq 12 \quad n \leq 3 \rightarrow n \leq 3$	6
$a_{r-d} + a_r + a_{r+d} = 11 \rightarrow a_r = V$ $a_r =$ $a_{r-rd}, a_r, a_{r+rd} = 1.5 \rightarrow a_r = \frac{1.5}{r} = 15a$ $a_r - a_r = d \rightarrow 15a - V = 11$ $\frac{a_r - a_r}{r-d} = \frac{a_r}{r} = (V)$	7
$a_{r-d}, a_r, a_{r+d} = 15 \rightarrow a_r = 15 \quad \Rightarrow a_d + a_{15} = a_r + r d + a_r + r d + r a$ $1, 5, 9, \dots \quad t_n = r_{n-r}$ $a_r, a_{15} = 15$ $\downarrow$ $a_{r+d} \quad a_{r+d}$ $15 + 15d = 15 \rightarrow d = 0$ $a_{15} = a_r + 15d$ $15 + 15d = 15 \rightarrow d = 0$ $a_{15} = a_r + 15d$ $15 + 15d = 15 \rightarrow d = 0$	8
$S_n = \frac{n}{r} (r_0 + (n-1)d)$ $S_9 = 9 S_7$ $a_r = a + 9d$ $a_v = a + 4d = 15a$ $\frac{a_r}{a_v} = \frac{r_0 + 9d}{r_0 + 4d} = \frac{15}{11}$ $r_0 + 9d = 15(r_0 + 4d)$ $r_0 + 9d = 15r_0 + 60d$ $14d = -14r_0 \rightarrow d = -r_0$ $\frac{a_r}{a_v} = \frac{r_0 + 9d}{r_0 + 4d} = \frac{15}{11}$	9
$a_1 = 11$ $a_v = 15 \rightarrow 4d = 15 - 11 = 4 \rightarrow d = 1$ $11, 12, \dots$ $a'_r = \frac{15 - 11}{m+1} = \frac{4}{m+1}$ $a'_r = 11 + r d = 11 + r \left(\frac{4}{m+1} \right) = 11 - \frac{4}{m+1}$ $a'_r = 11 + r d = 11 + r \left(\frac{4}{m+1} \right) = 11 - \frac{4}{m+1}$ $11 - \frac{4}{m+1} = 15$ $11 - \frac{4}{m+1} = 15$ $m+1 = 1 \rightarrow m = 0$	10