

$$f_n = \underbrace{599}_{f_0}, \underbrace{1217}_{f_1}, \dots$$

$$a_i(n-1)d = 5(n-1)f = 5 + f_n - f = f_n + 1 \quad (\text{الف})$$

$$\underbrace{f(10)}_{f_0} + 1 = 41$$

ب) جاهه دهم

$$f_n = \underbrace{6210}_{f_0}, \underbrace{12217}_{f_1}, \dots$$

$$S_n = \frac{n}{2} (2a_1 + (n-1)d) = 5(12 + \underbrace{(10-1)f}_{f_1}) = 2f_0 \quad (\text{الف})$$

$$f \times 1 = 532$$

$$f_{29}, f_{30}, f_{31}, f_{32} \rightarrow f_{30} \rightarrow f_{30} = f_1 + \frac{29d}{112} = 122 \quad (\text{ب})$$

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

$$f_{25} = f_{23} + 2d$$

$$2 \times \frac{1}{2} = 1$$

$$a_n = 2^{\frac{n}{2}}, 3 \times 2^{\frac{n}{2}}, 5^{\frac{n}{2}} \rightarrow 2^{\frac{n}{2}}, 3 \times 2^{\frac{n}{2}}, 5^{\frac{n}{2}}$$

$$b_n = 26, 27, y$$

$$\frac{26+y}{2} = 1 \quad 26+y = 2$$

$$1 \times 3 = 3$$

$$2x = y = -1$$

$$x + y = 2$$

$$3x = 3 \quad x = 1 \quad y = 3$$

$$3 \times 2^{\frac{n}{2}} + 5 \times 2^{\frac{n}{2}} = 5^{\frac{n}{2}}$$

$$2^{\frac{n}{2}} \times 8 = 5^{\frac{n}{2}}, \quad 2^{n+1} = 5^{\frac{n}{2}}$$

$$2n+1 = y$$

$$2n-y = -1$$

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

$$d = 2n-1 = (2n-1) = 3$$

$$-2 \quad 2m \quad f = \frac{1}{2} \times 3 = 3$$

$$T_5 = 3 + 3 = 6$$

$$f_{10} = 2n + 4m$$

$$f_{10} - 2 = 0$$

$$a_n = 3, 7, 9, 11 \rightarrow r_{n+1} \rightarrow r_0 = \underline{11}$$

$$b_n = 3, 7, 11, 15 \rightarrow r_{n-1} \rightarrow r_0 = 15$$

$$d = 4 \quad a + (n-1)d = 11 + 9n - 4 = 9n - 1 \leq 11 \quad \begin{matrix} 9n \leq 12 \\ n \leq 1.33 \end{matrix}$$

$$a_1 = 11$$

$$a_1 + a_2 + a_3 = 11 \quad a_2 = 11 \quad a_3 = 11 \quad r_0 = d$$

$$a_1 + a_2 + a_3 = 10.5 \quad a_3 = 10.5 \quad a_2 = 10.5$$

$$a_1 = a_2 - d = 11 - 19 = -19$$

$$a_3 - a_2 + a_1 = 11 - 19 + 11 = 3$$

$$d = 3$$

$$a_1 + a_2 + a_3 = 11 \quad a_2 = 11 \quad a_3 = 11$$

$$a_2 + a_3 = 11 \quad + r_0$$

$$a_1 + a_2 + a_3 + a_4 + a_5 = 10 \quad a_2 = 10 \quad a_3 = 10$$

$$a_1 + (n-1)d \rightarrow 1 + (9 \times 3) = 28 \quad a_1 + r_0 = 11/10$$

$$a_1 + r_0 = 11$$

$$S_n = \frac{n}{2} (2a_1 + (n-1)d)$$

$$\frac{9}{2} (2a_1 + 11d) = \frac{9}{2} (2a_1 + 11d)$$

$$2a_1 + 11d = 2a_1 + 11d$$

$$2d = 11d \quad d = 11d$$

$$\frac{a_{r_0}}{a_v} = \frac{a_1 + 19d}{a_1 + 9d}$$

$$\frac{a_{r_0}}{a_v} = \frac{a_1 + 11d}{a_1 + 11d}$$

$$\frac{a_{r_0}}{a_v} = \frac{11d}{11d} = 1$$

$$a_1 = 11 \quad d = \frac{11}{9} = 1.22 \quad a_1 + (n-1)d$$

$$a_v = 11$$

$$a_1 = 11$$

$$11 + 11d = 11$$

$$11d = -11$$

$$d = -1$$

$$a_f = 11 + 3 \times 1 = 14$$

$$a_1 + (n-1)d = 11$$

$$11 - an + 11 = 11$$

$$an = 11$$

$$n = 9$$