

الف) $t_n = 5, 9, 13, 17, \dots$
 $d = 4$

$t_n = f_{n+1}$

(2)

ب) $t_0 = f_{10} + 1 = 11$

$S_n = \frac{n}{2}(a + f_n) = 2(11) = 22$

$t_n = f_{n+2}$

$t_{10} = f_{12} = 19$

(1, 0)

ج) $t_n = 10, 12, 14, \dots$

$S_n = \frac{1}{2}(10 + 14) = 12$

$2(a_1 + a_4) = 49$

$t_{10} = 10 + 2 \times 10 = 30$

$t_{12} = 10 + 2 \times 12 = 34$

$a_1 + a_4 = a_2 + a_3 = a_1 + a_4 \rightarrow a_1 + a_4 = 10 + 2 \times 10 = 30$

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

$t_n = 1 + \sqrt{3} + (n-1)2 = 1 + \sqrt{3} + 2n - 2 = 2n - 1 + \sqrt{3}$

$d = 2 - \sqrt{3} - 2 = -\sqrt{3}$

$t_{12} = 23 - 22\sqrt{3} + 2\sqrt{3} = 23 - 20\sqrt{3}$

$t_{10} = 21 - 20\sqrt{3} + 2\sqrt{3} = 21 - 18\sqrt{3}$

$(2 - 2\sqrt{3})$

(2)

$a_n = 2^n, 2 \times 2^n, 2^y \Rightarrow 2^n, 2 \times 2^n, 2^y$

$b_n = x, y, y$

$x + d = y$

$-x + d = y$

$x - r = y \Rightarrow x + y = f$

$2, 4, 8, 16, \dots$

$+2, +2, +2, \dots$

$2^x = 2^y \Rightarrow y = x$

$xy = 3$

(2)

$2x = 1, 2x = 1, 2x, \dots \Rightarrow -1, 0, 1, \dots$

$d = 2x_{n-1} - 2x_n = 1, d = 2x_n - 2x_{n+1} = 1 \Rightarrow 2x_{n+1} = 1 \Rightarrow x_{n+1} = \frac{1}{2}$

$t_n = 2n - 1 \Rightarrow t_2 = 3 - 1 = 2$

(2)

s.a.m

$$a_n = r, \Delta, V, \dots$$

$$[r, r] \Rightarrow t_n = q_{n-1}$$

WKS

-9

$$b_n = r, \Delta, \Lambda, \dots$$

$$a_n = r_{n-1}$$

$$\hookrightarrow r_{n-1} + 1 = r \Rightarrow q_{n-1} = r \Rightarrow q_n = r \Rightarrow n = V$$

$$b_n = r_{n-1} = r \Rightarrow r_n = r \Rightarrow n = 1 \quad +v = r-1 = r$$

AKV
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$$a_1 + a_r + a_p = r \Rightarrow r_{a_r} = r \Rightarrow a_r = V$$

$$a_1 + a_r + a_d = 1 \Rightarrow r_{a_r} = 1 \Rightarrow a_r = r_d$$

$$\left. \begin{array}{l} r_d + V + a_1 = r \Rightarrow a_1 = -r_d \end{array} \right\}$$

-V

$$\frac{a_r - a_r + a_1}{a_1} = \frac{r_d - V + (-r_d)}{-r} = \frac{V}{-r} = -\frac{1}{r} \quad \checkmark$$

Y

$$a_1 + a_r + a_p = 1 \Rightarrow r_{a_r} = 1 \Rightarrow a_r = d \Rightarrow d + d = d$$

-1

$$a_r + a_d = r_u + v_d = r_d \Rightarrow b + d = r_d \Rightarrow d = 1 \Rightarrow d = r$$

$$a + r = d \Rightarrow a = r \quad t_n = r_{n-1} \Rightarrow t_{10} = \boxed{r-1 = r} \quad \checkmark$$

Y

$$S_a = a_s \Rightarrow \frac{a}{r} (r_u + v_d) = a \left(\frac{r}{r} (r_u + v_d) \right) \Rightarrow a_u + r v_d = r v_u + r v_d \quad \checkmark$$

-9

$$\Rightarrow a (a + r_d) = a (r_u + r_d) \Rightarrow d = r_a \Rightarrow \frac{a r}{a v} = \frac{a + r_d}{a + r_d} = \frac{r a}{r a} = \boxed{r} \quad \checkmark$$

Y

$$a_v - a_1 = r_d \Rightarrow r_f = r_d \Rightarrow d = r$$

-10

$$a_n = r_{n-1} + v \Rightarrow a_f = 14 + v = r$$

$$r_d = r_{r-1} = -1 \Rightarrow d = -1$$

$$b_n = n + r = r \quad \boxed{n = r}$$

Y

$$b_n = -2n + r \Rightarrow -2n + r = 1 \Rightarrow -2n = -r \Rightarrow n = \frac{r}{2} \quad \checkmark$$

s.a.m