

$$\begin{array}{r} 17, 13, 9 \\ \xrightarrow{+r} \xrightarrow{+r} \xrightarrow{+r} \\ r, r, r \end{array}$$

$$t_n = r_{n+1} \rightarrow r(b) + 1 = \underline{r16}$$

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$$\begin{array}{r} 18, 14, 10, 6 \\ \xrightarrow{+r} \xrightarrow{+r} \xrightarrow{+r} \xrightarrow{+r} \\ r, r, r, r \end{array}$$

$$t_n = r_{n+2} \rightarrow t_{10} = r(10) + 2 = r2$$

$$\frac{1}{r} (4 + r2) = \underline{r6}$$

$$\begin{aligned} t_{r2} + t_{r1} + t_{r9} + t_{r1} = \\ a + r1d + a + r0d + a + r1d + a + r0d = \end{aligned} \left\{ \begin{array}{l} r_{a+11}d = \\ r(4) + 11(r) = \\ \underline{r946} \end{array} \right.$$

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

$$3 - \sqrt{3} - 2 = 1 - \sqrt{3} = d$$

$$t_{r8} - t_{r3} = a + r4d - a - r2d = r2d = r(1 - \sqrt{3}) = \underline{r - r\sqrt{3}}$$

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$$3 \times \Delta^{rn} - \Delta^{rn} = \Delta^y - 3 \times \Delta^{rn} \rightarrow 3 \times \Delta^{rn} - \Delta^{rn} + 3 \times \Delta^{rn} = \Delta^y$$

$$\rightarrow \Delta^{rn} (3 - 1 + 3) = \Delta^y \rightarrow \Delta^{rn+1} = \Delta^y$$

$$y - r = r - n \rightarrow y = r - n \quad \text{if} \quad r_{n+1} = r - n \rightarrow r_n = r \rightarrow n = 1$$

$$ay = 1 \times r = \underline{r}$$

$$y = r$$

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$$\left. \begin{array}{l} r_n - r = \Delta n - r \\ r = r_n \end{array} \right\} n = \frac{r}{r} = \underline{\frac{1}{r}}$$

$$\begin{array}{r} 3, 0, 3 \\ \xrightarrow{+r} \xrightarrow{+r} \\ r, r \end{array}$$

$$t_n = r_n - 4 \Rightarrow t_6 = r(6) - 4 = \underline{96}$$

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$$a_1 = 4 \quad \text{و } a_n = 4$$

$$3, 7, 9, 11, 13, 15, 17, 19 \rightarrow r_{n+1} \Rightarrow r_0 \Rightarrow r(r_0)+1 = 41$$

$$2, 6, 8, 10, 12, 14, 16, 18 \rightarrow r_{n-1} \Rightarrow r_0 \Rightarrow r(r_0)-1 = 29$$

$$a + 4(n-1) \leq 41$$

$$a + 4n - 4 \leq 41$$

$$4n - 1 \leq 41$$

$$4n \leq 42 \quad n \leq 10.5 \rightarrow \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$a_1 + a_r + a_p = 21$$

$$ra + rd = 21 \quad [a+d=V]$$

$$(a+rd) - (a+d) + a \leftarrow a_p - a_r + a_1 =$$

$$a_1 = -21$$

$$a_1 + a_p + a_d = 10d$$

$$\Rightarrow d = rd - V = 21$$

$$ra + 4d = 10d$$

$$a = -21$$

$$-\frac{V}{r_1} = \left(-\frac{1}{r}\right)$$

$$r(a+rd) = r(rd)$$

$$a + rd = rd$$

$$ra_1 + rd = 1d \quad (r)$$

$$ra_1 + Vd = 2d \quad (r)$$

$$\begin{aligned} ra_1 + 4d &= 2d \\ -4a_1 + 1d &= 4d \end{aligned} \rightarrow \begin{aligned} 1d &= 4d \\ d &= 0 \end{aligned}$$

$$ra_1 + 9 = 1d$$

$$a_1 = 2$$

$$a_{10} = r + r(9) = 29$$

$$\frac{r}{r}(ra_1 + 1d) = 9 \times \frac{r}{r}(ra_1 + rd) \Rightarrow 9(a_1 + rd) = 9(ra_1 + rd) \Rightarrow$$

$$11a_1 = 9d \Rightarrow 2a_1 = d \Rightarrow a_1 = \frac{d}{2}$$

$$\frac{a_{r_0}}{a_r} = \frac{a_1 + 1d}{a_1 + 4d} = \frac{19, 5d}{4, 5d} = \frac{19}{4}$$

$$a_1 = 11$$

$$a_1 + 4d = 2d$$

$$4d = 2d \quad d = 0$$

$$11 + 4(n-1) = 4n + 7$$

$$a_1 = 11$$

$$a_r = a + rd = 2d$$

$$rd = 2d - 11$$

$$d = -5$$

$$E(4) + 7 = 23$$

$$11 - 5(n-1) = 11 - 5n + 5 = 16 - 5n$$

$$a_n = 16 \Rightarrow 16 - 5n = 16$$

$$\begin{aligned} -5n &= -30 \\ -5n &= 16 - 46 \end{aligned} \rightarrow \begin{aligned} -5n &= -30 \\ n &= 6 \end{aligned}$$

پس 13 جمله است

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