

و ۱۴ د ۱
 $n=1 \quad 4 \rightarrow 9 = 11$

۱۱/۱۵

۹۵
 جمله اول
 ۱۱
 جمله آخر
 دسته ۹
 دسته ۱
 ۹۴ ← آخری

✓

$\frac{11+95}{2} = 53$

$a=1, b=3$

$a = \frac{1}{3} b - 1 \quad b = 3a$

$\{a, 3a\}$

... و $a+2$ و $a+1$...

تعداد اعضای هر دسته = $3a - a + 1 = 2a + 1$

دسته اول $a_1 = 1 \quad b_1 = 3 \quad \{1, 2, 3\}$

✓

تعداد اعضا = $2+1=3$

دسته دوم $a_2 = 4, b_2 = 12 \quad \{4, 5, 6, \dots, 12\}$

دسته سوم $a_3 = 13, b_3 = 39 \quad \{13, 14, 15, \dots, 39\}$

دسته چهارم $a_4 = 16, b_4 = 48 \quad \{16, 17, 18, \dots, 48\}$

دسته پنجم $a_5 = 19, b_5 = 57 \quad \{19, 20, 21, \dots, 57\}$

میانگین = $\frac{\text{جمله اول} + \text{جمله آخر}}{2} = \frac{1+57}{2} = 29$

$a_0 + a_1 + a_2 + \dots + a_n = 19$

سریع محبت از مه است

$a_1 \begin{cases} n=3k+1 \\ 1=3k+1 \rightarrow k=0 \end{cases}$

$a_1 = -2(0) + 4 = 4$

$a_2 \begin{cases} n=3k+2 \\ 2=3k+2-1 \rightarrow k=0 \end{cases}$

$a_2 = \left[\frac{2-1}{3} \right] + a = 1+a$

$a_3 \begin{cases} n=3k \\ 3=3k \rightarrow k=1 \end{cases}$

$a_3 = 3-2a_2 = 3$

$a_4 = 1+a-2=0$
 $a_5 = a+1-2=0$
 $a_6 = a+2-2=1$
 $a_7 = 2+a-2=1$
 $a_8 = 2+a-2=1$
 $a_9 = 2+a-2=1$
 $a_{10} = 2+a-2=1$
 $a_{11} = 2+a-2=1$
 $a_{12} = 2+a-2=1$
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 $a_{100} = 2+a-2=1$

$a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8, a_9, a_{10}, a_{11}, a_{12}, a_{13}, a_{14}, a_{15}, a_{16}, a_{17}, a_{18}, a_{19}, a_{20}, a_{21}, a_{22}, a_{23}, a_{24}, a_{25}, a_{26}, a_{27}, a_{28}, a_{29}, a_{30}, a_{31}, a_{32}, a_{33}, a_{34}, a_{35}, a_{36}, a_{37}, a_{38}, a_{39}, a_{40}, a_{41}, a_{42}, a_{43}, a_{44}, a_{45}, a_{46}, a_{47}, a_{48}, a_{49}, a_{50}, a_{51}, a_{52}, a_{53}, a_{54}, a_{55}, a_{56}, a_{57}, a_{58}, a_{59}, a_{60}, a_{61}, a_{62}, a_{63}, a_{64}, a_{65}, a_{66}, a_{67}, a_{68}, a_{69}, a_{70}, a_{71}, a_{72}, a_{73}, a_{74}, a_{75}, a_{76}, a_{77}, a_{78}, a_{79}, a_{80}, a_{81}, a_{82}, a_{83}, a_{84}, a_{85}, a_{86}, a_{87}, a_{88}, a_{89}, a_{90}, a_{91}, a_{92}, a_{93}, a_{94}, a_{95}, a_{96}, a_{97}, a_{98}, a_{99}, a_{100}$

$$\alpha = \frac{-a_0}{V_0} = \frac{-1F}{V_0} = -\frac{1}{\omega}$$

$$19 = \omega b + c \quad \uparrow \quad -1$$

$$\alpha_n = an^2 + bn + c$$

$$n = \omega \rightarrow 1F = \frac{1}{\omega} (F\omega) + \omega b + c = -\omega + \omega b + c$$

$$n = V \rightarrow 1V, 1P = \frac{1}{V} (FV) + Vb + c = 1V, 1P$$

$$\begin{aligned} Vb + c &= 1V \\ -\omega b + c &= 19 \end{aligned}$$

$$Vb = 1 - c \quad b = \frac{1-c}{V}$$

$$\alpha_{1\omega} = 1F\omega + 1\omega b + c - \omega - F\omega + c_0 - 1 = 1F$$

$$\alpha_1 = \left(-\frac{1}{\omega} \right) F + \frac{F}{V} = \frac{1F}{1\omega} \quad 1, 1\omega$$

(1, 1\omega)

$$\frac{\alpha_{1\omega}}{\alpha_1} = \frac{\frac{1F}{1}}{\frac{1F}{1\omega}} = \frac{1\omega}{1} \quad \text{برابر}$$

$$L_{10} = 0 \rightarrow L_n = Kn + m \rightarrow 0$$

$$L_{10} = 10K + m = 0 \rightarrow m = -10K$$

$$L_n = Kn - 10K \rightarrow K(n - 10)$$

$$L_P = K(4 - 10) = -6K$$

$$L_V = K(5 - 10) = -5K$$

$$\alpha_n = \alpha_1 + (n-1)d \quad \leftarrow \text{معمولی}$$

$$\begin{aligned} \alpha_P &= -6K \rightarrow \alpha_1 + 4d = -6K \\ \alpha_V &= -5K \rightarrow \alpha_1 + 5d = -5K \end{aligned} \quad \left. \vphantom{\begin{aligned} \alpha_P &= -6K \\ \alpha_V &= -5K \end{aligned}} \right\} \begin{aligned} d &= \omega K \\ d &= \frac{\omega K}{F} \end{aligned}$$

$$L_{1\omega} = K(1\omega - 10) = \omega K$$

$$\frac{L_{1\omega}}{d} = \frac{\omega K}{\frac{\omega K}{F}} = F$$

(F) ✓

$$\mu \alpha_p (\frac{\mu \alpha_p}{\mu} - \alpha_1) = \omega \alpha_p \alpha$$

$$\mu \alpha_p (\alpha_1 + \mu d) = \omega \alpha_p \alpha$$

$\downarrow$
 $\alpha = \omega$

$$\mu \alpha_p = \omega \alpha \rightarrow \mu \alpha_1 + \mu d = \omega \alpha_1 \rightarrow \mu d = \mu \alpha_1$$

$$d = \frac{\mu \alpha_1}{\mu} \rightarrow$$

Ⓟ ✓

$$\frac{\alpha_p}{d} = \frac{\alpha_1 + \mu d}{d} \rightarrow \frac{\alpha_1 + \mu \alpha_1}{\frac{\mu \alpha_1}{\mu}} =$$

$$\frac{\mu \alpha_1}{\frac{\mu \alpha_1}{\mu}} = \frac{\mu}{\mu} = \frac{\mu}{\mu}$$

✓

$$a, b, c \rightarrow b - a = c - b$$

$$b, \frac{a}{p}, \frac{c}{p}$$

$$\mu b = a + c \rightarrow c = \mu b - a$$

$$\frac{\frac{a}{p}}{b} = \frac{\frac{c}{p}}{\mu b} = q$$

$$\frac{a}{p b} = \frac{c}{\mu b}$$

$$a^p = b^p \text{ (C)} \rightarrow a^p = b^p (\mu b - a)$$

$$a^p = \mu b^p - a b^p$$

$$a^p + a b^p - \mu b^p = 0$$

$$\Delta = a^p b^p + \mu b^p a^p$$

Ⓟ ✓

$$\textcircled{1} a = \frac{-b + \mu b}{p} = \frac{\mu b - b}{p} = \frac{b(\mu - 1)}{p}$$

$$\textcircled{2} a = \frac{-b - \mu b}{p} = \frac{-b(1 + \mu)}{p} \rightarrow a = -\frac{b(1 + \mu)}{p}$$

$$\textcircled{1} \omega b \rightarrow q = \frac{\frac{a}{p}}{b} = \frac{\frac{b}{p}}{b} = \frac{1}{p} \times p \rightarrow \boxed{1}$$

$$\textcircled{2} \omega b \rightarrow q = \frac{\frac{a}{p}}{b} = \frac{\frac{-p b}{p}}{b} = \frac{-b}{b} = -1 \times p \rightarrow \boxed{-p}$$

✓

$$\omega a, b, c$$

$$b = a q, c = a q^p$$

$$a q$$

$$a q^p$$

$$q + \mu q - p = 0$$

$$\omega \mu a, \mu a, c \rightarrow \mu a - \mu b = c - \mu a$$

$$p - \mu q = q^p$$

$$\frac{a q}{a q} = \frac{a q^p}{a q^p} = q^p$$

$$\mu a - \mu a q = a q^p - \mu a$$

$$\div a \uparrow a \neq 0$$

$$\mu a - \mu a q + \mu a = a q^p \rightarrow \mu a - \mu a q = a q^p$$

$$q^2 + 3q - 4 = 0$$

جملات متساوی - $q = 1 \rightarrow X.G.G$

$$q = -4 \quad \checkmark$$

$$\frac{\alpha q}{\alpha} = q^2 = (-4)^2 = \frac{-4}{3}$$

9

و α و $n=1$

$$\frac{\alpha_1 q^2}{\alpha_1^2 q^2} =$$

$$\frac{\alpha \alpha}{(\alpha_1)^2} + \frac{\alpha_1}{(\alpha)^2} = 2$$

$$\textcircled{1} \quad \frac{\alpha q^2}{(\alpha q)^2} = \frac{q^2}{\alpha^2}$$

$$\textcircled{2} \quad \frac{\alpha^2}{(\alpha)^2} = \frac{\alpha q}{\alpha^2} = \frac{q}{\alpha_1}$$

$$\frac{q^2}{\alpha^2} + \frac{q}{\alpha} =$$

$$2 + 2 = 2$$

$$2^2 + 2 - 2 = 0$$

$$(2-1)(2+2) \rightarrow 2 = 1 \rightarrow \frac{q}{\alpha}$$

$$2 = -1 \rightarrow \frac{q}{\alpha}$$

$$\frac{\alpha}{q} = \frac{-1}{2} \text{ و } 1$$

10

$$\frac{1}{2} - \frac{1}{2} = \frac{1}{q}$$

$$(\alpha_1 q)^2 = \alpha_1 q^2$$

$$\alpha_1 q^2 = 2V$$

$$\alpha_n = \alpha_1 q^{n-1}$$

$$\alpha_n = 2V$$

$$\frac{1}{q} q^2 = 2V \leftarrow \frac{1}{q}$$

$$\alpha_1 q^2 = 2V$$

$$(\alpha_1 q^2)^2 = \alpha_1 q^2$$

$$\textcircled{2} \quad \checkmark$$

$$q = 2 \leftarrow q^2 = 2V$$

$$\alpha_1 = \frac{1}{q} = \frac{1}{2}$$

$$\alpha_1 = \frac{1}{q} \leftarrow \alpha_1 q = 1$$

$$q \neq 0 \leftarrow \alpha_1 q^2 = 2V$$