

۱. $\frac{9\omega + 11}{7} = \sqrt{2}$ ۱

۲. $(1, -3), (2, -1), (3, 1), (4, 3), (5, 5)$ ۲

$\frac{293 + 121}{7} = \sqrt{2}$

۳. $a_1 + a_2 + a_3 + a_4 + a_5 + a_6 + a_7 + a_8 + a_9 + a_{10} = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = 10$ ۳

$2r + 2a = 19 \rightarrow a = -r \rightarrow \boxed{a = -1}$

$a_1 + a_2 + a_3 + \dots + a_{19} = 0 + 0 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = 10$ ۱۰

۴. $a_\omega = 1f$ ۴
 $a_v = 1v, r$ ۱۵

$\begin{cases} -\omega + \omega b + c = 1f \\ -\frac{f}{\omega} + vb + c = 1v, r \end{cases} \rightarrow \begin{cases} -\omega + \omega b + c = 1f \\ -\frac{f}{\omega} + vb + c = 1v, r \end{cases}$ ۱۵

$\frac{a_{1\omega}}{a_1} = \frac{1f}{1v} = \frac{f}{v} \times \omega = \boxed{\frac{f\omega}{v}}$ ۱۵

۵. $\begin{pmatrix} m_f = n_r \\ m_n = n_v \end{pmatrix} \omega a$ ۵
 $\omega a = fd$
 $a = \frac{c}{\omega} d$
 $h_{1\omega} = h_{10} + \omega a = 0 + \omega a = \omega \times \left(\frac{c}{\omega} d\right) = \boxed{cd}$

۹. $9a^r = \omega a_f a + r a_v a \rightarrow 9(a+d)^r = \omega(a+rd)a + r(a+d)a$ ۹

$9a^r, 9d^r + 1rad = \omega a^r + 10ad + rad + rad$

$\Rightarrow \frac{9a^r}{a} + \frac{9d^r}{d} = \omega + 10 + 2r \rightarrow a = \frac{-d + \sqrt{f^2 d^2}}{f} = \frac{r}{f} d$ ۳۰

$\frac{a^r}{d} = \frac{a + rd}{d} = \frac{\frac{r}{f} d + rd}{d} = \frac{r}{f} + r = \frac{r(f+1)}{f}$ ۳۰

مثلاً $c, b, a \rightarrow a, a+d, a+2d$ $r_{\text{میانگین}} = \frac{b}{a} = \frac{a+b}{2} = \frac{r(-\frac{1}{2}b+b)}{2}$

$$\text{نسبة} = \frac{b}{\frac{a}{r}} = \frac{a+b}{\frac{a+r}{r}b} = \frac{r(\frac{a}{r}b+b)}{\frac{a}{r}b+rb}$$

$$\frac{\frac{1}{\frac{1}{\omega}}}{\frac{1}{\omega}} = \frac{1}{\omega}$$

$$\mu = \frac{1}{\omega}$$

~~$$r = \frac{\frac{a}{r}}{\frac{c}{r}} = \frac{ra}{c}, \quad r = \frac{b}{\frac{a}{r}} = \frac{rb}{a} \rightarrow \frac{ra}{c} = \frac{rb}{a} \rightarrow ar = bc$$~~

$$a^r + \binom{r}{1} a^{r-1} b + \binom{r}{2} a^{r-2} b^2 + \dots + b^r = (a+b)^r$$

$$\Rightarrow (b^r + r a) b = 0 \Rightarrow b (b^r + r a) = 0 \quad b = 0 \quad \text{Q.E.D.}$$

$$r_b = r_a \Rightarrow a = \frac{c}{\mu} b \checkmark$$

$$\text{Example } \frac{r_b + c}{r} - r_a \Rightarrow a = \frac{r_b + c}{r} \quad \text{D}$$

$$b = \frac{r_c + \omega c}{\wedge}$$

$$a \times c = b^r \quad \text{①} \Rightarrow \frac{(r \cdot b + c)}{1} \times c = b^r$$

$$\Rightarrow \frac{r}{r} bc + \frac{1}{r} c^r = b^r \Rightarrow b^r - \frac{rc}{r} b - \frac{c^r}{r} = 0 \Rightarrow b = \frac{rc}{r} + \sqrt{\frac{r^2 c^2}{r^2} + \frac{c^r}{r}}$$

$$q = \frac{b}{c} \left(\frac{r_c + \omega r}{\Lambda_c} = \frac{r + \omega}{\Lambda} = \frac{1}{\beta} \right) \quad \text{for } \frac{a_q}{a_r} = q^r = \left(\frac{1}{c} \right)^r = \left(\frac{1}{q^r} \right)$$

$$\frac{a_q}{(a_r)^n} + \frac{a_r}{(a)^r} = r \rightarrow \frac{a q^{\omega}}{a^n q^r} + \frac{a q}{a^r} = r \Rightarrow \frac{q^r}{a^r} + \frac{q}{a} = r$$

15. $\underline{q} = 21$ $x^r + x - r = 0 \Rightarrow x = 1, -r$

$$\frac{a^r}{a_r} = \frac{a^r}{a_g} = \frac{a}{r} = \frac{1}{a_1} = 1, -\frac{1}{r}$$

20

$a_r = r$
 $a_c = r^r$
 $a_o = r^r$

$d = r$

$\frac{1}{r}$

$\textcircled{a} r^r = r$
 $a r^r = r^r$
 $\textcircled{a} r^r = r^r \rightarrow r^r = r^r \rightarrow \boxed{r = r}$

$a_r = 1$
 $a_c = \frac{1}{r}$

$\frac{1}{r} - \frac{1}{r} = \frac{r}{r} - \frac{r}{r} = \boxed{\frac{1}{r}}$

$$\frac{1}{1} - \frac{1}{2} = \frac{1^2}{4} - \frac{1}{4} = \frac{1}{4}$$

21 = 10