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دسته نهم $\rightarrow 9^2 = 81$
اولی $\Rightarrow 8^2 + 1 = 65$

میانگین = $\frac{65 + 81}{2} = 73$

✓

$\{1, 2, 3\}$

$\{4, \text{---}, 12\}$

$\{13, \text{---}, 39\}$

$\{40, \text{---}, 120\}$

$\{121, \text{---}, 363\} \Rightarrow$ دسته دهم

میانگین دسته دهم = $\frac{121 + 363}{2} = 242$

✓

$(2^0 + 2^1 + 2^2 + 2^3) + (4 + 8 + 0) + (1 + a + \frac{a}{2} + a + 2a) = 19$

$2^0 + 2^1 + 2^2 + 2^3 = 15$ $4 + 8 + 0 = 12$ $a + 2a = 3a$

$a + a + a + \dots + a + 9 = -1 + -1 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 = -2$

✓

$\frac{a_{15}}{a_1} = \frac{1 \times 1 \times (-\frac{1}{2}) + 1 \times 1^4 - 1}{-\frac{1}{2} + 1 - 1} = \frac{1^4}{\frac{1^4}{2}} = 2$

$\begin{cases} 2a + b + c = 14 \\ 4a + 7b + c = 17 \end{cases} \Rightarrow 12a + b = 19$

$2 \times (-\frac{1}{2}) + 1 + c = 14$

$a = \frac{1}{12} \times (-14) = -\frac{1}{6}$ $b = 19 - 12 \times (-\frac{1}{6}) = 20$

$c = 11$

$a + 3d$ $a + 7d$

$b + d'$ $b + 9d'$

✓

$b + 9d' = 0 \Rightarrow b = -9d'$

$\frac{b + 14d'}{d} = \frac{-9d' + 14d'}{d} = \frac{5d'}{d}$

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

$\begin{cases} -9d' + d' = a + 3d \Rightarrow a + 3d = -8d' \\ -9d' + 9d' = a + 7d \Rightarrow a + 7d = 0 \end{cases} \Rightarrow \frac{d'}{d} = \frac{1}{2}$

$$q(a+d)^r = \omega(a+rd)/a + r(a+d)a \Rightarrow qd^r = ad + ra^r \Rightarrow ra^r + ad - qd^r = 0$$

$$qd^r - ad - ra^r = 0 \quad d = \frac{a \pm \sqrt{ar + r\Lambda ar}}{1r} \rightarrow d = -\frac{a}{r} \Rightarrow a = -rd$$

$$\rightarrow d = \frac{ra}{r} \Rightarrow a = \frac{rd}{r}$$

$$\frac{a_r}{d} \frac{a+rd}{d} \rightarrow \frac{-rd+rd}{d} = \underline{+1}$$

$$\rightarrow \frac{r}{r} d + rd = \underline{\frac{a}{r}} \quad \text{✓}$$

$$c \quad b \quad a \quad b = c+d \quad -rcd:rd^r \text{ and } d=0 \quad \text{✓}$$

$$a = c+rd = c + r(-\frac{r}{r}c) = -\frac{1}{r}c \quad \rightarrow -rc = rd \Rightarrow d = -\frac{r}{r}c$$

$$\frac{c}{r} \quad \frac{a}{r} \quad b \Rightarrow (c+d)\frac{c}{r} = (\frac{c+rd}{r})^r \quad \frac{c^r+cd}{r} = \frac{c^r+rd^r+rd}{r}$$

$$rd = \frac{r}{r} \frac{a}{r} = r \frac{ra}{c} = r \frac{a}{c} = r(-\frac{1}{r}c) = r \times -\frac{1}{r} = \underline{-1} \quad \text{✓}$$

$$c \quad b \quad a \quad b = cq \quad a = cq^r \quad q^r = \frac{r}{r}$$

$$c \quad ra \quad rb \quad \frac{c^r(cq)}{r} = rcq^r \quad r \cancel{c} \cancel{q} = r \cancel{c} q^r$$

$$\frac{c(1+rd)}{r} = rcq^r \quad 1+rd = rcq^r$$

$$\frac{aq}{a_q} = q^r = (-\frac{1}{r})^r = -\frac{1}{r} \quad \text{✓}$$

$$q = \frac{r}{r} = 1 \quad q = -\frac{1}{r} (q-r)(q+1) = 0$$

$$\frac{aq^\omega}{(aq)^r} + \frac{aq}{(a)^r} = r \quad \frac{a^r}{a_q} = \frac{a^r}{aq} \rightarrow \frac{a^r}{aqa} = \frac{a^r}{a^r} = \underline{1}$$

$$\frac{a^r}{a(-ra)} = \frac{a^r}{-ra^r} = \underline{-\frac{1}{r}} \quad \text{✓}$$

$$\frac{q^r}{a^r} + \frac{q}{a} = r \quad q^r + aq = ra^r$$

$$q^r + aq - ra^r = 0 \quad q = \frac{-a \pm \sqrt{a^r + \Lambda a^r}}{r} = \frac{a}{r} = q \quad \text{✓}$$

$$a_r = \sqrt{a_r} \quad \frac{a_\omega}{a_r} = q^r = \frac{rV}{1} = rV \Rightarrow q = r$$

$$aq^r = \sqrt{aq^r} \quad \frac{a_r}{q} = a_1 \quad a_1 = \frac{1}{r}$$

$$a^r q^r = a q^r \quad \frac{1}{r} - a_1 = \frac{1}{r} - \frac{1}{r} = \underline{\frac{1}{r}} \quad \text{✓}$$

$aq = 1 = a_r$