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$$x = (\text{شماره دسته})^2 \quad \checkmark$$

$$\text{عدد آخر دسته پنجم} = 44 \quad \checkmark$$

$$\text{دسته پنجم} = 45, 46, \dots, 81 \rightarrow \text{میانگین} = \frac{45 + 81}{2} = \boxed{63} \quad \checkmark$$

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$$\{1, 2, 3\}, \{4, 5, 6, 7, 8, 9\}, \{10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20\}, \{21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40\}$$

$$\text{میانگین} = \frac{343 + 121}{2} = \boxed{232} \quad \checkmark$$

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$$n = 3k \rightarrow 0, 3, 6, 9, 12, \dots \rightarrow a_0 = 1, a_3 = 2, a_6 = 4, a_9 = 8, \dots$$

$$n = 3k + 1 \rightarrow 1, 4, 7, 10, \dots \rightarrow a_1 = 4, a_4 = 2, a_7 = 0, \dots \Rightarrow a_0 + a_1 + \dots + a_9 = 19 = 25 + 3a$$

$$n = 3k + 2 \rightarrow 2, 5, 8, 11, \dots \rightarrow a_2 = 1 + a, a_5 = 1 + a, a_8 = 2 + a \Rightarrow a_2 = -2$$

$$\text{مجموع} \Rightarrow 1 \cdot a + (1 + 1 + 2 + 2 + 2 + 2 + 2 + 2 + 2) = -2 + 18 = \boxed{-2} \quad \checkmark$$

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$$a = \frac{1}{v} \cdot x(-14) = \frac{-14}{v} \rightarrow an = \frac{-nr}{a} + bn + c \rightarrow a2 = -2 + 2b + c + 12 \rightarrow 2b + c = 19$$

$$av = \frac{-19}{v} + vb + c = 17, 2 \rightarrow \frac{vb + c}{v} = 17, 2$$

$$\rightarrow a_{12} = \frac{-12r}{a} + (12 \times 4) - 1 = 14$$

$$a_1 = \frac{-1r}{a} + (1 \times 4) - 1 = 2/18 \rightarrow \frac{a_{12}}{a_1} = \boxed{5} \quad \checkmark$$

$b = 4, c = -1$

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$$a_1 = br, a_n = bv \rightarrow a_n - a_1 = bv - br \rightarrow \epsilon d = \Delta d' \rightarrow \frac{d'}{d} = \frac{\epsilon}{\Delta}$$

$$b_1 = 0 \rightarrow b + 9d' = 0 \rightarrow b_1 = -9d'$$

$$\rightarrow \frac{b_{12}}{d} = \frac{b_1 + 11\epsilon d'}{d} = \frac{-9d' + 11\epsilon d'}{d} = \left(\frac{\epsilon d'}{d}\right) \frac{2}{\Delta} = \boxed{2} \quad \checkmark$$

$$\begin{aligned} q(a+d)^r &= q a(a+rd) + r q a(a+d) \rightarrow q a^2 + q r d + r q a^2 + r q a d \\ &\rightarrow r q a^2 + a d - q d^2 = \frac{0}{1} \rightarrow a^2 + a d - r q a d = (a - r d)(a + r d) \rightarrow a = \frac{r}{1} d \\ &\rightarrow a = -r d \end{aligned}$$

$$\frac{a r}{d} = \frac{a + r d}{d} \rightarrow \frac{\frac{r}{1} d + r d}{d} = \frac{q}{1} \boxed{\frac{r}{1} d}$$

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

$$\begin{aligned} \sigma_{\text{iso}} &\rightarrow a, a+d, a+rd \\ \sigma_{\text{iso}} &\rightarrow a+d, \frac{a}{r}, \frac{a+rd}{2} \rightarrow \frac{a^r}{2}, \frac{(a+d)(a+rd)}{2} \\ \rightarrow a^r &= a^r + rd^r + rad \rightarrow rd^r + rad = \cdot \rightarrow d(rd + ra) = \cdot \rightarrow d \neq 0 \text{ is, is in } \mathbb{Z} \\ \rightarrow rd + ra &= \cdot \rightarrow a = -\frac{r}{r}d \\ \rightarrow -\frac{r}{r}d + d, \frac{rd}{r}, \frac{-\frac{r}{r}d + rd}{2} &\rightarrow \frac{d}{r}, \frac{d}{r}, \frac{d}{r} \rightarrow g = -1 \rightarrow r g = \boxed{-r} \end{aligned}$$

$$\begin{aligned} r a &= \frac{r b + c}{r} \rightarrow r a = r b + c \rightarrow r a = r b q + b q^r \rightarrow r = r q + q^r \rightarrow q^r + r q - r = 0 \\ \rightarrow (q + r)(q - 1) &= 0 \rightarrow q \neq 0 \text{ من أجل أن } q \neq 1 \\ \rightarrow q + r &= 0 \rightarrow q = -r \\ -\frac{a q}{a r} &= \frac{a q^r}{a q^r} = q^r = (-r)^r = \boxed{-r^r} \end{aligned}$$

$$\frac{a q_r^2}{a q_r^r} + \frac{a q}{a r} \Rightarrow \frac{q^r}{a^r} + \frac{q}{a} \Rightarrow r \rightarrow \frac{q}{a} \Rightarrow T \rightarrow r^r + T - r \Rightarrow (T+r)(T-1) = 0$$

$$\frac{a^r}{a_r} = \frac{a^r}{a q} \Rightarrow \frac{a}{q} \Rightarrow \frac{1}{T} \rightarrow \begin{matrix} \boxed{1} \\ \boxed{\frac{-1}{T}} \end{matrix}$$

$$a q^r = \sqrt{a q^r} \rightarrow a^r q^{\dagger} = a q^r \rightarrow a q = 1$$

$$q_{\text{L}}^{\text{f}} \approx 1 \times q_{\text{L}}^{\text{r}} \approx q_{\text{L}}^{\text{r}} \approx q_{\text{L}}^{\text{p}}$$

$$a = \frac{a_2}{g} = \frac{rv}{g} = \frac{1}{r} \rightarrow \frac{1}{r} - a = \frac{1}{r} - \frac{1}{r} = \boxed{\frac{1}{g}}$$