

5

$$a_n = a_1 + (n-1)d \rightarrow a_1 + 5d = \overset{-9C}{b_1 + C} \rightarrow a_1 + 5d = -9C$$

$$b_n = b_1 + (n-1)C \rightarrow a_1 + 7d = \overset{-9C}{b_1 + 4C} \rightarrow a_1 + 7d = -9C$$

$$b_1 + 4C = 0 \rightarrow b_1 = -4C$$

$$fd = 9C$$

$$d = \frac{9}{f}C$$

$$\frac{b_{10}}{d} = \frac{\omega x}{\frac{0}{f}x} = \boxed{f}$$

4

$$4(a+d) = \omega a(a+5d) + 5a(a+d)$$

$$4a^2 + 4d^2 + 11ad = \omega a^2 + 11ad + 5a^2 + 5ad$$

$$4a^2 + 4d^2 + 11ad = a^2 + 5ad + 5a^2 + 5ad = (a+5d)(a+d) \rightarrow a = \frac{5}{4}d, -5d$$

$$\frac{a_f}{d} = \frac{a+5d}{d} \rightarrow \frac{\frac{5}{4}d + 5d}{d} = \frac{\frac{25}{4}d}{d} = \boxed{\frac{25}{4}}$$

$$\frac{-5d + 5d}{d} = \boxed{1}$$

✓

$$a+c=5b \rightarrow a=5b-c$$

$$\frac{bc}{x} = \frac{a^2}{x} \rightarrow a^2 = bc \rightarrow (5b-c)^2 = bc \rightarrow 5b^2 + c^2 - 10bc = bc$$

$$c = 5b \leq \cancel{5b} \leftarrow (c-5b)(c-b) = 0 \leftarrow 5b^2 + c^2 - 6bc = 0$$

$$a = 5b - c \rightarrow a = 5b - 5b = 0 \xrightarrow{\text{دنيا لى}} b, -b, b \rightarrow q = -1, \boxed{2q = -2}$$

1

$$c+5b=5a \rightarrow c=5a-5b$$

$$ac=b^2 \rightarrow 5a^2 - 5ab = b^2 \rightarrow 5a^2 - 5ab - b^2 = 0 \rightarrow -(b-a)(b+5a) = 0$$

$$\begin{matrix} b=a \\ b=-5a \end{matrix}$$

$$\text{دنيا لى} = 14a, -5a, a \rightarrow q = -\frac{1}{5}$$

$$\frac{a_4}{a_4} = q^4 = \boxed{-\frac{1}{5^4}}$$

بارشکلی

$$\frac{a_r}{(a_r)^r} + \frac{a_r}{a^r} = r \rightarrow \frac{a q^r}{a^r q^r} + \frac{a q}{a^r} = \frac{a q^r + a^r q^r}{a^r q^r} = r$$

(9)

$$\frac{a q^r (q^r + a q)}{\frac{a^r q^r}{a^r q^r}} \rightarrow \frac{q^r + a q}{a^r} = r \rightarrow q^r + a q = r a^r \rightarrow q^r + a q - r a^r = 0$$

$$\frac{a^r}{a_r} = \frac{a}{a q} = \frac{a}{q} = 1, \frac{1}{r} \quad \begin{matrix} q = a \\ q = r a \end{matrix} \rightarrow (q + r a)(q - a) = 0$$

(10)

$$a_r = \sqrt{a_f} \rightarrow a q^r = \sqrt{a q^r} \rightarrow \frac{a_f}{(a_r)^r} = 1 \rightarrow \frac{a q^r}{a q^r} = 1 \rightarrow \frac{1}{a q} = 1$$

$$a q = 1$$

$$a_\omega = r v \rightarrow a q \times q^r = r v \rightarrow q^r = r v \rightarrow q = r, a = \frac{1}{r}$$

$$\frac{1}{r} - a = \frac{1}{r} - \frac{1}{r} = \frac{r - r}{r} = \frac{0}{r}$$