

$\{1\}$, $\{2, 3, 4\}$, $\{5, 6, 7, 8, 9\}$, $\{10, 11, 12, 13, 14, 15, 16\}$
 دسته ۱ دسته ۲ دسته ۳ دسته ۴
 $a_1 = 1$ $a_2 = 2$ $a_3 = 3$ $a_4 = 4$
 $a_5 = 5$ $a_6 = 6$ $a_7 = 7$ $a_8 = 8$ $a_9 = 9$ $a_{10} = 10$ $a_{11} = 11$ $a_{12} = 12$ $a_{13} = 13$ $a_{14} = 14$ $a_{15} = 15$ $a_{16} = 16$
 $a_{17} = 17$ $a_{18} = 18$ $a_{19} = 19$ $a_{20} = 20$ $a_{21} = 21$ $a_{22} = 22$ $a_{23} = 23$ $a_{24} = 24$ $a_{25} = 25$ $a_{26} = 26$ $a_{27} = 27$ $a_{28} = 28$ $a_{29} = 29$ $a_{30} = 30$

$\{k, \dots, 3k\}$, $\{3k+1, \dots, 9k+3\}$, $\{9k+4, \dots, 27k+12\}$
 $\{27k+13, \dots, 81k+39\}$, $\{81k+40, \dots, 243k+120\}$
 $\{243k+121, \dots, 729k+363\}$
 $\frac{121 + 363}{2} = 242$

$a_1 \rightarrow 3k+1 \rightarrow k=0 \Rightarrow 1$ $a_2 \rightarrow 3k+2 \rightarrow k=1 \Rightarrow 5$
 $a_3 \rightarrow 3k+3 \rightarrow k=2 \Rightarrow 9$ $a_4 \rightarrow 3k+4 \rightarrow k=3 \Rightarrow 13$
 $a_5 \rightarrow 3k+5 \rightarrow k=4 \Rightarrow 17$ $a_6 \rightarrow 3k+6 \rightarrow k=5 \Rightarrow 21$
 $a_7 \rightarrow 3k+7 \rightarrow k=6 \Rightarrow 25$ $a_8 \rightarrow 3k+8 \rightarrow k=7 \Rightarrow 29$
 $a_9 \rightarrow 3k+9 \rightarrow k=8 \Rightarrow 33$ $a_{10} \rightarrow 3k+10 \rightarrow k=9 \Rightarrow 37$
 $a_{11} \rightarrow 3k+11 \rightarrow k=10 \Rightarrow 41$ $a_{12} \rightarrow 3k+12 \rightarrow k=11 \Rightarrow 45$
 $a_{13} \rightarrow 3k+13 \rightarrow k=12 \Rightarrow 49$ $a_{14} \rightarrow 3k+14 \rightarrow k=13 \Rightarrow 53$
 $a_{15} \rightarrow 3k+15 \rightarrow k=14 \Rightarrow 57$ $a_{16} \rightarrow 3k+16 \rightarrow k=15 \Rightarrow 61$
 $a_{17} \rightarrow 3k+17 \rightarrow k=16 \Rightarrow 65$ $a_{18} \rightarrow 3k+18 \rightarrow k=17 \Rightarrow 69$
 $a_{19} \rightarrow 3k+19 \rightarrow k=18 \Rightarrow 73$ $a_{20} \rightarrow 3k+20 \rightarrow k=19 \Rightarrow 77$
 $a_{21} \rightarrow 3k+21 \rightarrow k=20 \Rightarrow 81$ $a_{22} \rightarrow 3k+22 \rightarrow k=21 \Rightarrow 85$
 $a_{23} \rightarrow 3k+23 \rightarrow k=22 \Rightarrow 89$ $a_{24} \rightarrow 3k+24 \rightarrow k=23 \Rightarrow 93$
 $a_{25} \rightarrow 3k+25 \rightarrow k=24 \Rightarrow 97$ $a_{26} \rightarrow 3k+26 \rightarrow k=25 \Rightarrow 101$
 $a_{27} \rightarrow 3k+27 \rightarrow k=26 \Rightarrow 105$ $a_{28} \rightarrow 3k+28 \rightarrow k=27 \Rightarrow 109$
 $a_{29} \rightarrow 3k+29 \rightarrow k=28 \Rightarrow 113$ $a_{30} \rightarrow 3k+30 \rightarrow k=29 \Rightarrow 117$

$a_n = an^2 + bn + c \rightarrow -\frac{1}{2}n^2 + fn - 1$ $\frac{1f}{2} = a$
 $a = \frac{1}{2} \times -1 \rightarrow -\frac{1}{2}$ $a_1 = -\frac{1}{2} \times 1 + f - 1 = 1f$
 $a_2 = 1f$ $a_3 = 1f$ $a_4 = 1f$ $a_5 = 1f$ $a_6 = 1f$ $a_7 = 1f$ $a_8 = 1f$ $a_9 = 1f$ $a_{10} = 1f$ $a_{11} = 1f$ $a_{12} = 1f$ $a_{13} = 1f$ $a_{14} = 1f$ $a_{15} = 1f$ $a_{16} = 1f$ $a_{17} = 1f$ $a_{18} = 1f$ $a_{19} = 1f$ $a_{20} = 1f$ $a_{21} = 1f$ $a_{22} = 1f$ $a_{23} = 1f$ $a_{24} = 1f$ $a_{25} = 1f$ $a_{26} = 1f$ $a_{27} = 1f$ $a_{28} = 1f$ $a_{29} = 1f$ $a_{30} = 1f$

$a_1 + 3d$ $a_1 + 4d$ $a_1 + 5d$ $a_1 + 6d$ $a_1 + 7d$ $a_1 + 8d$ $a_1 + 9d$ $a_1 + 10d$ $a_1 + 11d$ $a_1 + 12d$ $a_1 + 13d$ $a_1 + 14d$ $a_1 + 15d$ $a_1 + 16d$ $a_1 + 17d$ $a_1 + 18d$ $a_1 + 19d$ $a_1 + 20d$ $a_1 + 21d$ $a_1 + 22d$ $a_1 + 23d$ $a_1 + 24d$ $a_1 + 25d$ $a_1 + 26d$ $a_1 + 27d$ $a_1 + 28d$ $a_1 + 29d$ $a_1 + 30d$

$$\begin{aligned}
 & \omega n^p - \omega d^p \\
 & a_p = n \rightarrow 4n^p = \omega(q_f + d)(n - d) + \omega n(n - d) \\
 & \rightarrow 4n^p - \omega d n - \omega d^p = 0 \rightarrow n = \frac{\omega d \pm \sqrt{\omega^2 d^2 + 4\omega d^p}}{2} \rightarrow \frac{1}{2}d \\
 & q_f = a_p + \omega d \rightarrow \frac{1}{2}d + \omega d = \frac{1}{2}d \rightarrow \frac{1}{2}d = \frac{1}{2}d \rightarrow -d \\
 & -d + \omega d = \frac{1}{2}d \rightarrow \frac{d}{2} = 1 \rightarrow \frac{d}{2} = 1
 \end{aligned}$$

$$\begin{aligned}
 & C, b, a \\
 & \downarrow +d \quad \downarrow +d \\
 & b, c+d \rightarrow \frac{1}{p}d \\
 & a = c + \omega d \rightarrow \frac{r}{p}d \\
 & q = -1 \rightarrow \frac{r}{p}d = -\frac{r}{p}d \\
 & \omega \rightarrow \frac{c}{f}, \frac{a}{r}, b \rightarrow \frac{1}{p}d, \frac{1}{p}d, \frac{1}{p}d \\
 & \rightarrow \frac{c}{f}, \frac{c + \omega d}{r}, c + d \rightarrow (c + d)(\frac{c}{f}) = (\frac{c + \omega d}{r})^p \\
 & \frac{c^p}{f} + \frac{dc}{f} = \frac{c^p + \omega d^p + \omega c d}{f} \\
 & \frac{c^p}{f} + \frac{dc}{f} = \frac{c^p + \omega d^p + \omega c d}{f} \\
 & \frac{c^p}{f} + \frac{dc}{f} = \frac{c^p + \omega d^p + \omega c d}{f}
 \end{aligned}$$

$$\begin{aligned}
 & a, b, c \\
 & \downarrow \frac{b}{q}, b, bq \\
 & \frac{a_q}{a_y} = q^p \rightarrow c, \omega a, \omega b \\
 & (-f)^p = -f^p \rightarrow bq, \frac{r}{p}b, \omega b \rightarrow \frac{r}{p}b - bq = \omega b - \frac{r}{p}b \\
 & -bq + \frac{r}{p}b = \omega b \\
 & -bq^p + \frac{r}{p}b = \omega bq \\
 & -bq^p + \frac{r}{p}b = \omega bq \\
 & -bq^p + \frac{r}{p}b = \omega bq \\
 & -bq^p + \frac{r}{p}b = \omega bq
 \end{aligned}$$

$$\begin{aligned}
 & \frac{a_1 q^{\omega}}{(a_1 q)^p} + \frac{a_1 q}{(a_1)^p} = r \rightarrow \frac{q^p}{a_1^p} + \frac{a_1 q}{a_1^p} = r \rightarrow a_1 q + q^p = r a_1^p \\
 & a_1 q + q^p - r a_1^p = 0 \\
 & q = \frac{-a_1 \pm \sqrt{a_1^2 + 4a_1^p}}{2} \rightarrow a_1 \rightarrow q = a_1^p \\
 & -r a_1 - a_1 = -r a_1^p \\
 & \frac{a_1^p}{a_1^p} = 1 \\
 & \frac{a_1^p}{-r a_1^p} = -\frac{1}{r}
 \end{aligned}$$

$$\begin{aligned}
 & a_{\omega} = \omega V \\
 & a_p = a_f \rightarrow a_p^p q^f = \frac{\omega V}{q} \rightarrow \left(\frac{\omega V}{q^p}\right)^p = \frac{\omega V}{q} \rightarrow \omega V q^{\omega} = \omega V^p \\
 & \omega V = q^{\omega} \\
 & \frac{1}{q} - \frac{1}{q^p} = \frac{1}{q} \\
 & \frac{1}{q} - \frac{1}{q^p} = \frac{1}{q}
 \end{aligned}$$

$$\frac{1}{q} - \frac{1}{q^p} = \frac{1}{q}$$