

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۳۰۰ کلاس: نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۳۰۰ کلاس:	
$a_1 = 1, a_2 = 4$ $d = \frac{a_2 - a_1}{2} = 3 \rightarrow t_n = 1 + 3n \rightarrow 1 + 3n = 997 \rightarrow 3n = 996 \rightarrow n = 332$	۱
$1, 1.8, 1.6, \dots, 997 \rightarrow n = \frac{997 - 1.1}{0.8} + 1 = 129$	۲
$a_{n+1}, a_{n+2}, a_{n+3} = 3a_{n+2} = -4n + 12 \rightarrow a_{n+2} = -2n + 6 \rightarrow n = 4 \rightarrow a_4 = -12 + 6 = -6$ $\rightarrow a_4 + a_{10} = -6 - 24 = -30$	۳
$r^{n+1} = \frac{r^n - 3 + r^n - 1}{2} \rightarrow r^{n+1} = r^n + r^n - 2 \rightarrow (r \times r^n) + r^n = (r^n \times r^n) + r^n$ $\rightarrow r(r^n + 1) = r^n(r^n + 1) \Rightarrow r^2 = r^n \rightarrow n = 2$ $\left. \begin{array}{l} a_2 = r^2 - 1 = 3 \\ a_1 = r^1 = 1 \\ a_{13} = r^6 - 1 = 13 \end{array} \right\} 13 + 1 + 3 = 17$	۴
$a_{12} - a_1 = 2d = 10 \rightarrow d = 5$ $a_{12} + a_{12} = 2(a_{11}) = 20 \rightarrow a_{11} = 10$ $a_{12} = a_{11} + 1 \cdot d \rightarrow 10 + 5 = 15$	۵

$$a_1 + \overbrace{a_r + a_r + a_r + a_r + a_r}^{5ar} = \frac{1}{5} (a_1 + \overbrace{a_1 + a_1 + a_1 + a_1 + a_1}^{5a_1}) \rightarrow 5ar = \frac{5a_1}{5}$$

$$\rightarrow 5ar = 5a_1 \rightarrow rar = a_1 \rightarrow ra + rd = a + rd \rightarrow ra = d$$

$$\rightarrow \frac{ar}{a_1} = \frac{a+d}{d} = \frac{ra}{a} = r$$

$$t_n = t_{n-r} + 10 \rightarrow t_n = t_n - rd + 10 \rightarrow rd = 10 \rightarrow d = 2$$

$$\frac{t_9 - t_0}{tv} = \frac{(t_9 - t_0)(t_9 + t_0)}{tv} = \frac{(10d)(19tv)}{tv} = 19d = 19 \times 2 = 38$$

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

$$d = \frac{r_1 - r}{t_{n-r} + 1} = \frac{r_1}{t_n - r} = \frac{10}{r_{n-1}}$$

$$a_{n+1} = a + nd \rightarrow 11 = r + \frac{10n}{r_{n-1}} \rightarrow \frac{10n}{r_{n-1}} = 9 \rightarrow n = r$$

$$a_n + a_{n+1} = a_r + a_{r+1} \rightarrow rn + t = r + 10 \rightarrow n = 1$$

$$\frac{a_n}{a_r} = r \rightarrow a + rd = ra + rd \rightarrow a = -d \rightarrow a_n = a + (n-r)d \rightarrow -d + (n-1)d = dn - rd = d(n-r)$$

$$a_n = d(n-r) \Rightarrow n-r = 1 \rightarrow n = r$$