

$$a_1 = r_0$$

$$a_1 = r_0 \rightarrow \frac{r_0}{a_1} + r_0 d = r_0$$

$$r_0 d = r_0 - r_0$$

$$d = 0$$

$$a_2 = r_0 A$$

$$r_0 A + (n-1) r_0 V = r_0 A$$

$$V n = 1 r_0 A \Rightarrow n = r_0 A$$

$$100 \leq V n + r_0 \leq 999$$

$$(100 - 100) / 1 = 0$$

$$99 \leq V n \leq 999$$

$$100 \leq n \leq 1000$$

$$a_{n+1} + a_{n+2} + a_{n+3} = -4n + 11r$$

$$a_{n+1} d + a_{n+2} d + a_{n+3} d = -4n + 11r$$

$$r a_n + 4d = -4n + 11r \Rightarrow d = r \quad a = -r$$

$$a_1 + a_n$$

$$a_1 + r_0 d + a_1 + r_0 d =$$

$$r_0 A + r_0 d = r_0 A$$

$$-r + r = 0$$

$$r^{12} - r^0, \quad r^0 + 1, \quad r^0 - 1$$

$$a_1 + a_n + a_{11} = 4$$

$$1 + r + 1 = 4$$

$$\frac{r^{12} - r^0 + r^0 - 1}{r} = r^6$$

$$\frac{r^{12} - r^0 + r^0 - 1}{r} = r^6$$

$$r^{12} = r^0$$

$$r = 1$$

$$a_1 r - a_{10} = 0 \Rightarrow r_0 d = 0$$

$$a_{10} + a_1 r = r_0 d$$

$$r a_1 + \frac{r_0 d}{r} = r_0 d$$

$$a_1 = -\frac{r_0 d}{r}$$

$$a_1 r = a_1 + r_0 d$$

$$\frac{-r_0 d}{r} + \frac{r_0 d}{r} = \frac{r_0 d}{r} = \boxed{r_0 d}$$

$$\frac{a_1}{r} (a_1 + a_{10}) = \frac{1}{r} \left[\frac{a_1}{r} (a_1 + a_{10}) \right]$$

$$\frac{a_1}{r} (r a_1 + r_0 d) = \frac{1}{r} \left[\frac{a_1}{r} (r a_1 + r_0 d) \right]$$

$$\frac{a_1}{r} (a_1 + r_0 d) = \frac{1}{r} [r (a_1 + r_0 d)] \Rightarrow (a_1 + r_0 d) = \frac{a_1}{r} + \frac{r_0 d}{r} = r a_1 + r_0 d = a_1 + r_0 d$$

$$r a_1 = a_1$$

$$\frac{a_1}{a_1} = \frac{a_1 + r_0 d}{a_1} = \frac{r_0 d}{a_1} = r_0 d$$

$$t_n = t_n - r + 10$$

$$\frac{(t_9 - t_0)}{t_v} = \frac{(t_9 - t_0) (t_9 + t_0)}{t_v} = \frac{t_9 - t_0}{r} = r_0 d$$

$$= r_0 d = 0$$

$$t_9 = t_1 + 10$$

$$t_0 = t_1 + 10$$

$$t_4 = t_1 + 10$$

$$t_v = t_9 + 10 = t_1 + 10 \rightarrow t_v - t_9 = r_0 d = 10 \Rightarrow d = 0$$

$$a = \frac{a_{n+1}^{(1)} - a_n^{(1)}}{n+1} = \frac{r\sqrt{r} - r}{r^2} = \frac{r\sqrt{r}}{r^2} = \frac{1}{\sqrt{r}}$$

$$p(n) = p(n+1) \Rightarrow a_{n+1} = 1 = a_1 + (n-1)d$$

$$d = \frac{r-1}{n-1} = \frac{r}{n-1} = \frac{1}{r}$$

$$r + (n) \times \frac{1}{r} = 1 \Rightarrow \frac{1}{r} = 1 - r \Rightarrow r = \frac{1}{1-r} \Rightarrow r = 1$$

$$a_n + a_{n+1} = a_1 + a_2 \Rightarrow r a_1 + (n-1 + n+1)d = r a_1 + 2nd$$

$$a_n = r a_1$$

$$a_1 = r a_2$$

$$a_1 + (n-1)d = a_1 + (n-1)(-a_1) = 0$$

$$a_1 (1-n+1) = 0 \Rightarrow a_1 = 0$$

$$n=1$$