

$$\begin{aligned}
 q_1 + a_1 r + a_1 r^2 &= 21 \rightarrow a_1 (1 + r + r^2) = 21 \\
 a_1 \cdot a_1 r \cdot a_1 r^2 &= 24 \rightarrow a_1^3 \cdot r^3 \\
 \frac{1+r^2}{r} &= \frac{14}{r} \quad 4r^2 - 14r + 4 = 0 \quad r^2 - \frac{7}{2}r + 1 = 0 \\
 \delta &= \frac{1}{4} \quad a_1 = 14
 \end{aligned}$$

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$$\begin{aligned}
 r &= \frac{x^2 + 4}{2x} = \frac{2x}{x^2 - 2} \rightarrow x^2(2x^2 - 2) = 1 \\
 x &\begin{cases} 2 \\ -2 \end{cases} \quad \begin{matrix} 1 & 4 & 2 \\ 1 & 2 & 2 \end{matrix} \quad \delta = \frac{1}{2} \\
 S_V &= 1 \left(\frac{1 - (\frac{1}{2})^V}{1 - \frac{1}{2}} \right) = \frac{12V}{1}
 \end{aligned}$$

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$$\begin{aligned}
 S_\omega &= a_1 \left(\frac{1 - q^r}{1 - q} \right) \rightarrow 242 \times \left(\frac{121}{11} \right) = 264 \\
 S_\omega &\rightarrow q_1 + a_1 r + a_1 r^2 + a_1 r^3 + a_1 r^4 = \underbrace{(1 + r + r^2 + r^3 + r^4)}_{\frac{121}{11}} a_1 \rightarrow 264
 \end{aligned}$$

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$$\begin{aligned}
 \frac{44-1}{\omega+1} &= 10, \omega \rightarrow A = 10, \omega \rightarrow A = 10, \omega \\
 a_4 &= a_1 + 3d = 1 + 3 \times 10, \omega = 31, \omega \\
 A &= 22, \omega \\
 1, 0, 0, 0, 0, 0, 44 & \rightarrow B + A = 10, \omega \\
 B &= a_1 r^3 = 1 \times r^3 = 1 \quad r = 2 \\
 \delta &= 44
 \end{aligned}$$

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$$\begin{aligned}
 d &= \frac{-\frac{90}{r} - (-24)}{r-1} = 0, 2\omega = \frac{1}{r} \quad a_{101} = a_1 + 100d = -24 + (100 \times \frac{1}{r}) = 1 \\
 a_n &= a_1 r^n = 1 \\
 128 \times r^n &= 1 \\
 128 &= \frac{1}{r^n} \Rightarrow r = \sqrt[7]{128} = \frac{1}{2} \leq r^{-1}
 \end{aligned}$$

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$$a_p \rightarrow a_1$$

$$a_v \rightarrow a_r$$

$$a_q \rightarrow a_r$$

$$a_r^r = a_1 a_p \rightarrow (a_1 + r d)^r = (a_1 + r d)(a_1 + r d)$$

$$a_1^r + r d^r + 1 r d = a_1^r + 1 a_1 d^r + r d + 1 r d$$

$$d = -\frac{a}{r}$$

$$a_r \rightarrow a_1$$

$$a_f \rightarrow a_r$$

$$a_q \rightarrow a_r$$

$$a_r^r = a_1 a_r \rightarrow (a_1 + r d)^r = (a_1 + r d)(a_1 + r d)$$

$$-r a d + 1 r d = 0$$

$$d = 0$$

$$d = a$$

$$a_r = r a$$

$$a_f = f a$$

$$a_1 = 1 a$$

$$r = r$$

$$a_{10} = \frac{1}{r} \times r^q = r^{-1} \times r^q = r^{q-1}$$

$$r a_r$$

$$r a_r^r$$

$$a_r^r$$

$$a_r^r \rightarrow$$

$$r a_r^r - r a_r = a_r^r - r a_r^r$$

$$a_r^r \times (r - r) = r^r - r a_r + r$$

$$r = 1 \text{ لـ } r$$

$$r = 1 \text{ لـ } r$$

$$r = 1 \text{ لـ } r$$

$$r = \frac{1}{r}$$

$$\frac{1}{r} > \frac{r}{r} > \dots$$

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

$$r = \frac{1}{r} \text{ لـ } r$$

$$a_f = a_1 + r d = \frac{1}{r} - \frac{r}{r} = \frac{1}{r}$$

$$a_1 = a_1 + r d = \frac{1}{r} - \frac{r}{r} = \frac{1}{r}$$

$$a_{1r} = a_1 + r d = \frac{1}{r} - \frac{1r}{r} = -1$$

$$-\frac{r}{r} > -\frac{r}{r} > -\frac{1r}{r} \quad r = \frac{-\frac{r}{r}}{-\frac{r}{r}} = \frac{-\frac{r}{r}}{-\frac{1r}{r}} \rightarrow \frac{r}{r}$$

$$a_1 + a_r^r + a_r^y = r^r$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$a_1 \quad a_r \quad a_{10}$$

$$a_1 + a_1 + d + a_1 + r d = r^r$$

$$d = a_r^r - a_1$$

$$10 a_r^r - V a_1 = r^r$$

$$a_1 (1 + r^r + r^y) = r^r \quad a (r^r - V) = a (1 + r^y)$$

$$r a_r^r - V a = a_1 + a_r^r + a_r^y$$

$$r = 1 \text{ لـ } r$$

$$a_1 = r$$

$$d = a_r^r - a_1 = 1 \times r^r - 1 = r$$