

$$q\left(\frac{q^r-1}{q-1}\right) = 11 \Rightarrow a(q^r+q+1) \cdot 21 \Rightarrow aq^r+aq+a \cdot 21 \Rightarrow 4q+4 + \frac{4}{q}$$

$$\frac{q}{2} \times a \times aq = a^2 \cdot 4q \Rightarrow a \cdot 4$$

$$\begin{aligned} 4q^r+4q+4 \cdot 21q &\Rightarrow 4q^r-17q+42=0 \\ \times q &: \frac{1}{q} & q^r-17q+42=0 \\ \checkmark q &: \frac{14}{q} \cdot \frac{1}{q} & (q-1)(q-14)=0 \end{aligned}$$

$$x^r+4, 2x, x^r-2$$

$$4x^r = (x^r+4)(x^r-2) = x^r + 4x^r - 2 = 4x^r - 2 \Rightarrow x^r - 2x^r - 2 = 0$$

$$\begin{aligned} (x^r-4)(x^r+2) &= 0 \Rightarrow x^r \rightarrow -2 \text{ or } 4 \\ S_v &= 1 \left(\frac{1-(\frac{1}{4})^r}{1-\frac{1}{4}} \right) = 4 \times \frac{1-\frac{1}{4^r}}{1-\frac{1}{4}} = \frac{1-\frac{1}{4^r}}{\frac{3}{4}} \end{aligned}$$

$$a_n \rightarrow \begin{cases} 1, 2, 3, 4 \\ 1, 2, 3, 4 \end{cases} \Rightarrow a_n = 1, 2, 3, 4 \rightarrow q = \frac{1}{4}$$

$$1+q+q^r+q^r+q^r = \frac{121}{11}$$

$$a_1 = 24r$$

$$S_n = a + aq + aq^r + aq^r + aq^r = 24r \times \frac{121}{11} = 264r$$

$$d = \frac{q^r-1}{q} = 10/5 \rightarrow a_n = 1, 14, 22, 32, 44, 58, 74, 92$$

$$q^r = \frac{q^r}{1} \Rightarrow q = \pm 1 \Rightarrow b_n \rightarrow \begin{cases} 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 \\ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 \end{cases}$$

$$A+B \rightarrow \begin{cases} 22/10+1 = 23/10 \\ 22/10-1 = 21/10 \end{cases}$$

$$-24, -\frac{70}{4}, \dots \Rightarrow a_n = -\frac{70}{4}, -\frac{70}{4}, \dots \Rightarrow a_n = \frac{n-97}{4} \Rightarrow a_{101} = \frac{4}{4} = 1$$

$$141, a_4, \dots \Rightarrow \frac{141}{4} = 35.25 \Rightarrow q = \frac{1}{4} \Rightarrow q = \frac{1}{4}$$

$$a+rd, a+4d, a+16d \rightarrow a^r+16ad+16d^r, a^r+16ad+16d^r \Rightarrow rd^r+rd=0$$

$$rd(1+d+a)=0$$

$$d \rightarrow 0$$

$$a+d, a+rd, a+vd \rightarrow a^r+16ad+vd^r, a^r+16ad+vd^r \Rightarrow rd^r+rd=0 \Rightarrow rd(d+a)=0$$

$$\begin{cases} a+d = ra = \frac{1}{4} \Rightarrow ra = \frac{1}{4} \\ a+rd = 4 \times \frac{1}{4} = 1 \end{cases} \Rightarrow q = \frac{1}{4} = 2 \Rightarrow a_1 = aq^0 = \frac{1}{4} \times 1 = \frac{1}{4}$$

$$ra, q, raq^r, aq^r \rightarrow raq + aq^r = r \times raq^r \Rightarrow aq(q^r+q) = faq^r \Rightarrow r+q^r = fq$$

$$q^r - rq + r = 0 \Rightarrow (q-r)(r-1) = 0 \Rightarrow q = \frac{r}{r-1}$$

$$r, \frac{r}{4}, \dots \Rightarrow a_n = \frac{r-n}{4} \Rightarrow a_1 = \frac{r}{4} / a_n = \frac{1}{4} / a_{11} = \frac{r}{4}$$

$$b_n = \frac{r}{4} + 2, \frac{1}{4} + 2, \frac{r}{4} + 2 \Rightarrow x^r + \frac{r}{4} - \frac{r}{4} = x^r + \frac{r}{4} + \frac{1}{4} \Rightarrow 4x - 2 = 12x + 1 \Rightarrow 4x = 13x + 1 \Rightarrow x = -\frac{1}{9}$$

$$b_n = -4, -5, -\frac{r}{4} \Rightarrow q = \frac{-5}{-4} = 1/4$$

$$a_1 + \underbrace{a_1 q^r}_{+q^r} + \underbrace{a_1 q^q}_{+q^q} = Vr \rightarrow a_1 (1 + q^r + q^q) = Vr$$

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$$S.V = a_1, a_1 q^r, \dots, a_1 q^q \quad \left. \begin{array}{l} d = a_1 q^r - a_1 \\ d = a_1 q^q - a_1 q^r \end{array} \right\} \quad \frac{a_1 (q^r - 1) = a_1 q^r (q^q - 1)}{1} \Rightarrow 1 = \frac{q^r}{1}$$

$$q^r = 1$$

$$q = r$$

$$a_1 (1 + q^r + q^q) = Vr \Rightarrow a_1 (Vr) = Vr \rightarrow a_1 = 1$$

$$d = a_1 q^r - a_1 \Rightarrow d = 1 - 1 = 0$$