

11

$$\frac{a}{d} + a + ad = 11$$

$$a \times \frac{a}{d} \times ad = a^2 = 49 \rightarrow a = 7$$

$$\frac{7}{q} + 7 + 7q = 11 \xrightarrow{\times q} 7 + 7q + 7q^2 = 11q \rightarrow 7q^2 - 4q + 7 = 0$$

$$7q^2 - 4q + 7 = 0 \rightarrow q^2 - 4q + 14 = 0 \quad (q-14)(q-1)$$

$$q = \frac{14}{7} \quad \left[q = \frac{1}{7} \right]$$

$$x^2 - 2, 2x, x^2 + 2 \rightarrow (x-2)^2, (x^2+2)(x-2)$$

$$x^2 = x^2 - 1 + 2x^2 \Rightarrow 2x^2 = x^2 - 1 \Rightarrow x^2 - 2x^2 - 1 = 0$$

$$(x^2 - 2)(x^2 + 2) = 0 \quad \left| \begin{array}{l} x^2 = -2 \\ x^2 = 2 \end{array} \right. \quad \text{or } x^2 = 2 \rightarrow x = \sqrt{2}$$

$$S = 1 \left(\frac{(\frac{1}{2})^n - 1}{\frac{1}{2} - 1} \right) = 1 \times \frac{1 - \frac{1}{2^n}}{-\frac{1}{2}} = 2 \left(1 - \frac{1}{2^n} \right) = 2 - \frac{2}{2^n} = 2 - \frac{1}{2^{n-1}}$$

$$1 + q + q^2 + q^3 + q^4 = \frac{121}{11} \quad a_1 = 121$$

$$a_1 + a_2 + a_3 + a_4 + a_5 = ?$$

$$121 + 121q + 121q^2 + 121q^3 + 121q^4 = 121 \times \frac{121}{11} = 121 \times 11 = 1331$$

$$d = \frac{49-1}{5+1} = 8 \quad 1015 \rightarrow 1015 \div 8 = 126.875 \rightarrow 126$$

$$q = \frac{49}{1} = 49 = 7^2 \quad 7^2 \pm 1 \rightarrow 7^2 \pm 1 = 50 \rightarrow 50 \rightarrow A+B = 50$$

$$-r_2, -\frac{95}{2}, \dots \rightarrow -\frac{97}{2}, -\frac{95}{2}$$

⑤ - 5

$$a_1 = -\frac{97}{2}, a_2 = -\frac{95}{2} \rightarrow a_n = -\frac{97+n}{2} \rightarrow a_1 = -\frac{97+1}{2} = -\frac{98}{2} = -49$$

$$a_1, a_2, \dots, a_n \rightarrow a_1 \times a_2 = 1 \rightarrow a = \frac{1}{r}$$

$$a+rd, a+rd, a+rd \rightarrow (a+rd)^2 = (a+rd)(a+rd)$$

⑥ - 4

$$a+rd+rd = a+rd+rd \rightarrow r \cdot d = -rd$$

$$a_1 = -rd, a_2 = -rd, a_3 = a+rd = -rd \rightarrow a_3 = -rd$$

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

$d = 0$ سے قابل قبول چونکہ صفر سے بڑا نہیں ہوتا

$$a+rd, a+rd, a+rd \rightarrow (a+rd)^2 = (a+rd)(a+rd)$$

⑦ - 3

$$= a^2 + 4rd + rd^2 = a^2 +$$

$$rd^2 = r$$

$$a = d = \frac{1}{2}$$

؟ $a_1 = 1$ سے

$$raq, raq^2, aq^2$$

$$raq^2 = aq^2 + raq$$

- 1

$$aq(raq) = aq(q^2 + r)$$

$$raq = q^2 + r \rightarrow q^2 - raq + r = 0$$

$$(q-r)(q-1) = 0$$

$\hookrightarrow q = r$
 $\hookrightarrow q = 1$ سے غیر قابل قبول

⑧

$$r, \frac{v}{\varepsilon}, \dots$$

$$a_{\varepsilon} = a_1 + r d$$

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

$$a_{\wedge} = a_1 + v d$$

$$r - \frac{v}{\varepsilon} = \frac{1}{\varepsilon}$$

$$a_{1r} = a_1 + 1r d$$

$$r - r = -1$$

-9

$$-1 + n, \frac{1}{\varepsilon} + n, \frac{\delta}{\varepsilon} + n$$

$$\left(\frac{1}{\varepsilon} + n\right)^r = \left(\frac{\delta}{\varepsilon} + n\right)(-1 + n)$$

$$\frac{-\varepsilon - r_1}{\varepsilon}, \frac{1 + r_1}{\varepsilon}, \frac{a - r_1}{\varepsilon}$$

$$\frac{1}{14} + n + \frac{1}{r} n = \frac{1}{\varepsilon} n + n - \frac{a}{\varepsilon}$$

$$-\frac{r a}{\varepsilon}, -\frac{r_1}{\varepsilon}, -\frac{14}{\varepsilon}$$

$$\frac{1}{r} n + \frac{1}{14} = \frac{1}{\varepsilon} n - \frac{a}{\varepsilon}$$

$$-\varepsilon, -a, -\frac{r a}{\varepsilon}$$

$$\frac{1}{\varepsilon} n = -\frac{1}{14} - \frac{a}{\varepsilon} = \frac{-1 - r_1}{14} = -\frac{r_1}{14}$$

(Handwritten mark)

$$q = \frac{-a}{-\varepsilon} = \frac{a}{\varepsilon}$$

$$n = -\frac{r_1}{\varepsilon}$$

$$a_1 + a_r + a_v = v r$$

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

$$1, \wedge, 4r$$

$$a + a d^r + a d^q = v r$$

-10

(Handwritten mark)

$$a(1 + d^r + d^q) = v r$$

$$a = 1$$

$$r + r^r + 1 = v r \rightarrow d = r$$

(Handwritten note: "بسیار ساده")

$$a_1 = 1$$

$$a_r = \wedge$$

$$a_{1.} = 4r$$

$$d = \frac{a_r - a_1}{r - 1} = \boxed{r} \checkmark$$

$$q = 1$$

$$r a = v r \rightarrow a = \frac{v r}{r}$$

$$d = a q^r - a = \frac{v r}{r} - \frac{v r}{r} = 0 \rightarrow d = 0$$