

۱۲, ۵

معادله دیفرانسیل

$$\frac{a_1}{q} \times a \times a q = 4 \Rightarrow a = 4, \frac{4}{q} + 4 + 4q = 21 \Rightarrow \frac{4}{q} + 4q = 17 \Rightarrow q = \frac{4}{17} \checkmark$$

(۱, ۵)

$$(x^2 - 1) = x^2 + 4x^2 + 4x + 1 \Rightarrow x^2 + 4x + 1 = 0 \Rightarrow x = -2 \Rightarrow a_1 = 1 \Rightarrow a_2 = 4$$

$$\frac{x^2 - 1}{x^2} = \frac{1}{x^2} \Rightarrow x^2 - 1 = 0 \Rightarrow x = 1 \Rightarrow a_1 = 1, a_2 = 4, a_3 = 1 \Rightarrow 1 \left(\frac{1 - (\frac{1}{x})^3}{\frac{1}{x}} \right) = \frac{12x}{x}$$

(۱, ۵)

$$q_1 + a_1 q + a_1 q^2 + a_1 q^3 + a_1 q^4 = a_1 (1 + q + q^2 + q^3 + q^4) = 24 \Rightarrow \left(\frac{121}{11} \right) = 12 \checkmark$$

(۲)

$$d = \frac{b - a}{n + 1} = 10/11 \Rightarrow d = 22/11 \Rightarrow q^{n+1} = \frac{b}{a} \Rightarrow q^4 = 6 \Rightarrow q = 2 \Rightarrow A + B = -4 = -2$$

(۱, ۵)

$A + B = 24, 11$

$B = -11$

$$-\frac{9x}{x} - \frac{9d}{x} \Rightarrow d = \frac{1}{x} \Rightarrow -24 + \frac{(n-1)}{x} = 1 \Rightarrow \frac{n-1}{x} = 25 \Rightarrow n = 26$$

(۲)

$$1 = a, q^v \Rightarrow 1 = 121 \cdot q^v \Rightarrow q^v = \frac{1}{121} \Rightarrow q = \frac{1}{11} \checkmark$$

$$q^2 - q + 1 = 0 \Rightarrow q^2 = 1 \Rightarrow d = 0, q = 1 \Rightarrow a_1 = -10 \checkmark$$

(۲)

$$a_n = a_1 + (n-1)d = -10 + (n-1)0 = -10 \Rightarrow a_n = -10$$

$$q = \frac{1}{2} \Rightarrow 1 = 121 \cdot q^v \Rightarrow q^v = \frac{1}{121} \Rightarrow q = \frac{1}{11} \checkmark$$

(۱, ۵)

$$a_n \times a_r = (a+r)^r \rightarrow (a+rd)(a+d) = (a+rd)^r$$

١٧

$$\cancel{a^r} + rad + rd^r = \cancel{a^r} + 4ad + 9d^r \rightarrow \cancel{rad} = \cancel{rd^r} \rightarrow a = d$$

اینج چوں لفظ جلات متمايزه $d = 0$ عینہ

$$a_r = 2a \quad a_r = 4a \quad a_n = 8a \Rightarrow q = 2$$

$$a_{10} = aq^9 = \frac{1}{r} \times 2^9 = 128$$

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

١٩

$$a_r = 2 + 3\left(-\frac{1}{r}\right) = \frac{2}{r} \xrightarrow{\text{بہترین نتیجہ}} a_n = \frac{1}{r} \quad a_{13} = -1$$

$$\text{دنبہ هندسہ} \rightarrow \left(\frac{2}{r} + n\right)(-1 + n) = \left(\frac{1}{r} + n\right)^2 \rightarrow n = -\frac{21}{r}$$

$$\text{جلات : } -4, -2, -\frac{2}{r} \Rightarrow q = \frac{2}{r}$$

١٥) دنبہ هندسہ : a_n

دنبہ حسابی : b_n

$$a_r - a_1 = b_r - b_1 = d \rightarrow aq^r - a = d \star$$

$$a_r - a_1 = b_r - b_1 = 9d \rightarrow aq^r - a = 9d$$

$$\text{حالت اول} \rightarrow \frac{a(q^r - 1)}{a(q^9 - 1)} = \frac{1}{9} \rightarrow \frac{1}{q^3 + 1} = \frac{1}{9} \rightarrow q = 2$$

$$a_1 + a_1 q^r + a_1 q^9 = 73 \xrightarrow{q=2} a_1 = 1$$

حالت دوم

$$a_1 + a_1 q^3 + a_1 q^9 = 73$$

$$1 + 1 + 1 = 3$$

$$a_1 = 1$$

$$1 + 1 + 1 = 3$$