

Date:

یلتا انوری - دهم B

$$\frac{x}{r} \cdot x \cdot xr = 44 \rightarrow \boxed{x = 4} \quad , \quad \frac{4}{r} + 4 + 4r = 41$$

سوال ۱:

$$\frac{4 + 4r + 4r^2}{r} = 41 \rightarrow 4 + 4r + 4r^2 = 41r \rightarrow 4r^2 - 17r + 4 = 0 \rightarrow r^2 - 17r + 14 = 0$$

$$\rightarrow (r-14)(r-1) \begin{cases} r = \frac{14}{4} = \frac{7}{2} \rightarrow \frac{4}{\frac{7}{2}} + 4 + 4 \times \frac{7}{2} = 1 + 4 + 14 = 21 \checkmark \\ r = 1 \rightarrow 14 + 4 + 1 = 21 \checkmark \end{cases}$$

$$x^2 + 4 = 2n, \quad x^2 - 2 \rightarrow x^2 = x^2 + 4 - 2n - 2 = 2n - 2$$

سوال ۲:

$$x^2 - 2n - 2 = 0 \rightarrow (x^2 - 2)(x^2 + 2) \rightarrow x = \pm 2$$

$$\rightarrow x = \pm \sqrt{2}$$

$$\Rightarrow \boxed{x = 2} \rightarrow 1, 4, 2$$

$$S_v = n \left(\frac{\frac{1}{r} - 1}{\frac{1}{r}} \right) = \frac{12v}{n}$$

$$a + ar + ar^2 + ar^3 + ar^4 = ? \quad a(1 + r + r^2 + r^3 + r^4) = \frac{121}{11} \times 243$$

$$\rightarrow \frac{121}{1-11} \times 243 = 3436$$

$$d = \frac{b-a}{n+1} \rightarrow \frac{43}{6} = 10.5 \rightarrow 1, 11, 5, 122, 225, \text{ } \text{ } , 44$$

سوال ۳:

$$r^{n+1} \rightarrow B = r^{n+1} \Rightarrow r^6 = 44 \rightarrow \boxed{r = \pm 2} \rightarrow 1, 2, 4, 8, \text{ } \text{ } , 44$$

$$\rightarrow A + B = 32, \quad a + 1 = 4, \quad a$$

$$\rightarrow A + B = 32, \quad a + (-1) = 24, \quad a$$

Scb6

$$-2r, -9a, \dots \rightarrow d = \frac{-9a}{r} + 2r = \frac{-9a + 9r}{r} = \frac{1}{r} \rightarrow \text{سؤال ٥:}$$

$$a_n = -2r + (n-1) \frac{1}{r} \Rightarrow a_{1.1} = 1 \rightarrow 12 \wedge r^v = 1 \rightarrow r^v = \frac{1}{12 \wedge} \rightarrow r = 2^{-1}$$

$$(a+rd)^r = (a+rd)(a+rd) = a^2 + 2ard + r^2d^2 = a^2 + 2ard + r^2d^2 \quad \text{سؤال ٦:}$$

$$r^2d^2 + 2ard = 0 \rightarrow d(r^2d + 2ra) = 0 \rightarrow \begin{cases} d=0 \times \\ r^2d = -2ra \rightarrow d = \frac{-1}{10}a \end{cases}$$

$$d = \frac{-1}{10}a$$

$$\rightarrow a + rd = a + \frac{-2ra}{10} \rightarrow \frac{1a}{10} = \frac{ra}{5} \quad a + rd = a + \frac{-2}{10}a = \frac{8a}{10} = \frac{4a}{5}$$

$$d = \left(\frac{\frac{ra}{5}}{\frac{ra}{5}} \right) = \frac{r}{r} = \frac{1}{r} \quad \text{بجای } d=0 \rightarrow a, a, a \rightarrow \text{بجای}$$

$$a \rightarrow \frac{1}{r} = \frac{-1a}{10} \rightarrow a = \left(\frac{\frac{1}{r}}{\frac{-1}{10}} \right) = \frac{-10}{r} = -5$$

$$(a+rd)^r = (a+rd)(a+rd) \rightarrow a^2 + 2ard + r^2d^2 = a^2 + 2ard + r^2d^2 \quad \text{سؤال ٧:}$$

$$r^2d^2 - 2ard = 0 \rightarrow d(r^2d - 2ra) = 0 \rightarrow \begin{cases} d=0 \rightarrow \frac{1}{r}, \frac{1}{r}, \dots \text{بجای} \\ d=a \xrightarrow{a=\frac{1}{r}} d = \frac{1}{r} \end{cases}$$

$$\frac{1}{r} + \frac{1}{r} + \frac{1}{r} + \frac{r}{r} \rightarrow \frac{r}{r}, \frac{r}{r} \rightarrow r = \frac{1}{\frac{1}{r}} = r$$

$$a_{1.1} = \frac{1}{r} \times r^9 = r^9 = 12 \wedge \quad \text{بجای} \quad a_{1.1} = \frac{1}{r}$$

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

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سؤال ٨: $\varphi ar^r, \varphi ar^r, ar^r \rightarrow \varphi ar^r = \varphi ar + ar^r \rightarrow \varphi ar^r = ar(r + r^r)$

$\rightarrow \varphi r = r + r^r \rightarrow r^r - \varphi r + r = 0 \rightarrow (r-1)(r-\varphi) \rightarrow r=1 \rightarrow$ لغة غير ثابت
غير ثابت
 $r = \varphi$ ✓

سؤال ٩: $\varphi, \frac{\varphi}{r}, \dots \rightarrow d = \frac{\varphi}{r} - \frac{\varphi}{r} = \frac{-1}{r} \left(a_n = r + (n-1)\left(\frac{-1}{r}\right) = r - \frac{n}{r} + \frac{1}{r} = -\frac{n}{r} + \frac{r}{r} \right)$

$a_r = a + r^0 d = a + \frac{-1}{r} \xrightarrow{a=r} \frac{1}{r} + \frac{-1}{r} = \frac{0}{r}$

$a_n = a + r^1 d = a + \frac{-1}{r} \rightarrow \frac{1}{r} + \left(\frac{-1}{r}\right) = \frac{0}{r} \Rightarrow \left(\frac{1}{r} + n\right)^r = \left(\frac{0}{r} + n\right)(-1+n)$

$a_{1/r} = a + r^2 d = a + \frac{-1}{r} \rightarrow r + \left(\frac{-1}{r}\right) = -1$

$\frac{1}{14} + \cancel{n} + \frac{1}{r} n = \frac{-0}{r} + \frac{0}{r} n - n + \cancel{n} \rightarrow \frac{r1}{14} = \frac{-1}{r} n \rightarrow n = \left(\frac{\frac{r1}{14}}{\frac{-1}{r}}\right) = \frac{r \times r1}{-14 \times -1} = \frac{-r1}{r}$

سؤال ١٠: $a + ar^r + ar^r = r^r \rightarrow a(1 + r^r + r^r) = r^r$

$ar^r = a + d \rightarrow a(r^r - 1) = d, \quad a + 9d = ar^r \rightarrow a(r^r - 1) = 9d \Rightarrow \frac{9d}{d} = \frac{a(r^r - 1)}{a(r^r - 1)}$

$\frac{9d}{d} = \frac{(r^r + 1)(r^r - 1)}{r^r - 1} = \frac{9d}{d} = r^r + 1 \rightarrow r^r = 1 \rightarrow \boxed{r = 1}$

$\Rightarrow a(1 + 1 + 9r) = r^r \rightarrow r^r a = r^r \rightarrow \boxed{a = 1} \quad ar^r = 1 \times r^r = r^r = a + 9d$

$1 + 9d = r^r \rightarrow 9d = r^r \rightarrow \boxed{d = r}$