

2006/06/06

$$\rightarrow \Psi^\dagger = \Psi^{-1} \times \Psi^\Psi \times \Psi^{-1} = \Psi^\Psi \times \Psi^{-\Psi} = 1 \Psi^\dagger \rightarrow \frac{\Psi^\Psi}{\underbrace{\Psi^\Psi}_{\Sigma}} = 1 \Psi^\dagger \rightarrow \Psi^\Psi = \underbrace{\Sigma}_{\Psi^\Psi} \times \underbrace{1 \Psi^\dagger}_{\Psi^\Psi} = \Psi^\Psi = \Psi^9 \Rightarrow n=9 =$$

$$a_0 = 12 \quad a_1 = 99 \text{ (H)}$$

$$\frac{a q^V}{a q^E} = 1 \rightarrow q^V = 1 \rightarrow q = 2 \quad a_1 = a_1 \times q^V = 4 \times 94 = 376$$

$$a_p z a q^r = 10^{c_{pq}} (p)$$

$$(aq^r)^a = \hat{a}q^{1^0} = \psi \Sigma^r \rightarrow aq^r = \sqrt{\psi \Sigma^r} = \psi \quad a_{1^0} \times a_{2^0} = ? \quad (ب)$$

$$a^r q^z = (a q^r)^r z(w)^r = a$$

$$\frac{a+b}{r} = ?$$

$$\text{در حد } r^a, \varepsilon \sqrt{r}, r^b \quad \varepsilon \varepsilon$$

$$r^a \times r^b = r^c \rightarrow r^{a+b} = r^c \rightarrow a+b = c \rightarrow \frac{a+b}{r} = \frac{c}{r} = \frac{r}{r} = 1$$

$$a_r = 1 - x \quad a_v = x \quad a_{11} = x + 1$$

$$x = ? \quad \sqrt{(1+x)(1-x)} = x \rightarrow \sqrt{x^2 - 1} = x \rightarrow x - 1 = x$$

$$x = \frac{1 - n^2}{1 + n^2} \rightarrow 1 - n^2 = n^2 \rightarrow n^2 = 1 \rightarrow n = \pm 1 \rightarrow n = \pm \frac{1}{r}$$

$$a_1 + a_\varepsilon = 21$$

$$a_r + a_p = 17$$

$$a_1 + a_r + a_p + a_\varepsilon = \varepsilon_0 \rightarrow s_\varepsilon = \frac{a(q^\varepsilon - 1)}{q - 1} = \varepsilon_0 \rightarrow aq^\varepsilon - a = \varepsilon_0 q - \varepsilon_0$$

$$a_1 + a_r + a_p = 17 \rightarrow a_1 + a_r = 10$$

$$a_1 \times a_r \times a_p = 27 \rightarrow a^3 q^3 = 27 \rightarrow aq = \sqrt[3]{27} = 3 \rightarrow aq = 3$$

$$a_1 = 2 \quad a_r = 3 \quad a_p = 2$$

$$r^2, 4, 11$$

$$s_{10} = \frac{r(4^{10} - 1)}{4 - 1} = 4^{10} - 1 = 2995928$$

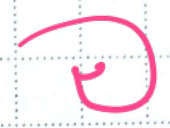
$$p_{10} = (2 \times 3^9 \times 2)^{10} = (2^2 \times 3^9)^{10} = 2^{20} \times 3^{90}$$

$$\rightarrow 2a - \frac{a}{q}, aq - a, aq^2 - aq, aq^3 - aq^2, \dots$$

$$a_1 = a, aq^1, aq^2, aq^3, \dots, aq^{n-2}, aq^{n-1}$$

(10

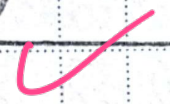
$$a_1, a_2, a_3, a_4, \dots, a_n$$



(الف

$$a + (a+d) + (a+2d) + (a+3d) + \dots + (a+(n-1)d)$$

$$na + d(1+2+3+\dots+n-1) \rightarrow na + d \frac{(n-1)n}{2} = \frac{n}{2} (2a + (n-1)d)$$



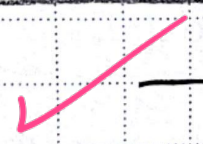
(ب

$$S = a_1 + a_2 + a_3 + \dots + a_n$$

$$S = a + aq + aq^2 + \dots + aq^{n-1}$$

$$Sq = aq + aq^2 + \dots + aq^{n-1} + aq^n$$

$$S - Sq = a - aq^n$$



$$\rightarrow S(1-q) = a(1-q^n)$$

$$\Rightarrow S = \frac{a(1-q^n)}{1-q}$$

$$\begin{aligned} a + aq^r &= 11 \\ aq + aq^r &= 12 \end{aligned} \rightarrow \frac{a(1+q^r)}{aq(1+q^r)} = \frac{(q^r - q + 1)}{q} = \frac{1}{q} \quad \text{سوال ٢}$$

$$rq^r - rq + r = 12q \rightarrow rq^r - 12q + r = 0 \xrightarrow{\text{نموذج}} q^r - 12q + r = 0$$

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

$$q = r \rightarrow a(1+r) = 11 \rightarrow a = 1 \rightarrow 1, r, q, 12$$

$$q = \frac{1}{r} \rightarrow \frac{a}{r} + \frac{a}{q} = 12 \rightarrow \frac{4a}{a} = 12 \rightarrow a = 12$$

$$12, q, r, 1 \rightarrow \max \text{Sum} \rightarrow 12$$

$$a_1 = \frac{a}{q}$$

$$a_2 = a$$

$$a_3 = aq$$

سوال ٧

$$\frac{a}{q} \times a \times aq = 12 \rightarrow a^3 = 12 \rightarrow \underline{a = 2}$$

$$\text{if } a = 2 \rightarrow \frac{1}{q} + 2 + 2q = 12 \rightarrow 2q^2 - 12q + 2 = 0$$

$$\Delta \rightarrow \frac{1 \pm \sqrt{1 - 4}}{4} = \frac{1 \pm 1}{4} \rightarrow \begin{matrix} r \\ \frac{1}{r} \end{matrix}$$

$$q = r \rightarrow \text{sum} = 1, 2, 4$$

$$q = \frac{1}{r} \rightarrow \text{sum} = 4, 2, 1$$