

Subject:

Date:

19, 75

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مقام نداشت

دمر بر A - تلف كاه 14

$$a_n = \frac{1}{r}, 1, 2, \dots \quad a_n = \frac{1}{r} \times 9^{n-1} \quad (2) - 1$$

$$(الف) \quad a_{10} = \frac{1}{r} \times 2^9 = 2^9 = 204 \checkmark$$

$$(ب) \quad \frac{a_{19}}{a_{17}} = \frac{a \times 2^{19}}{a \times 2^{17}} = 2^2 = 19 \checkmark$$

$$(ج) \quad a_4 = 4, a_{10} = 204 \quad \text{و} \quad 204 \times 4 = 816, \quad \text{و} \quad a_7 = \frac{1}{r} \times 2^4 = 2^0 = 32 \checkmark$$

$$(د) \quad 128 = \frac{1}{r} \times 2^{n-1} \rightarrow 204 = 2^{n-1}, \quad n-1 = 18 \rightarrow n = 19 \checkmark$$

$$\frac{a_9}{a_7} = 9^2 = \frac{99}{12} = 8.25, \quad 8 \rightarrow 9, 2 \rightarrow a_{10} = a_8 \times 9 = 99 \times 9 = 891 \checkmark \quad (2) - 2$$

$$(الف) \quad (a_4)^3 = 2^{12} \rightarrow a_4 = 8 \checkmark \quad (2) - 3$$

$$\sqrt{(a_1 \times a_9)^0} = 2^{12} \rightarrow (a_1 \times a_9)^0 = 09.49 \quad (ب)$$

$$a_1 \times a_9 = 9 \checkmark$$

$$r^a, r\sqrt{r}, r^b, \dots \rightarrow r^a = r^a \times r^b = r^{a+b} \rightarrow a+b=0 \quad (2) - 4$$

$$\frac{a+b}{r} = \frac{0}{r} = 0 \quad \checkmark$$

$$a_v' = a_v \times a_f \rightarrow r^r = \underbrace{(1-r)(r+1)}_{\text{اتحاد منقح}} = r+1 - r^1 r = r^r - 1 \quad (2) - 5$$

$$\rightarrow r^r = \frac{1}{r} \rightarrow r < \frac{\sqrt{0.5}}{-\sqrt{0.5}} \quad \text{مع } q^f \text{ يشبه! غفوف}$$

$$\left. \begin{aligned} a+ar^r &= r+1 \\ ar+ar^r &= 1r \end{aligned} \right\} \rightarrow a = \frac{r+1}{r^r+1} \quad \left. \begin{aligned} \frac{r+1}{r^r+1} &= \frac{1r}{r(r+1)} \\ \frac{r+1}{r^r+1} &= \frac{1r}{r(r+1)} \end{aligned} \right\} \rightarrow 28r(r+1) = 12r^r+12 \quad (2) - 6$$

$$\rightarrow 0 = 12 + 28r - 28r^r - 12r^r \rightarrow 0 = r + 7r = 7r^r - 3r^r < \begin{matrix} +1 \\ +3 \\ +\frac{1}{4} \end{matrix}$$

$$\underline{r^{\pm 13}} \quad 1, 3, 9, \boxed{27} \checkmark, r = \pm \frac{1}{3}, \boxed{27}, 9, 3, 1, r = \pm 1 \quad \text{طبقه اوله ممكنه}$$

$$\left. \begin{aligned} a+ar+ar^r &= 13 \\ a+ar+ar^r &= 27 \end{aligned} \right\} \rightarrow a = \frac{13}{r^r+r+1} \quad \left. \begin{aligned} \frac{13}{r^r+r+1} &= \frac{r}{r} \\ \frac{13}{r^r+r+1} &= \frac{r}{r} \end{aligned} \right\} \rightarrow a = \frac{r}{r} \quad (2) - 7$$

$$\rightarrow 13r = 3r^r + 3r + 3 \rightarrow 0 = 3r^r - 10r + 3 < \begin{matrix} r=3 \rightarrow 1, 3, 9 \\ r=\frac{1}{3} \rightarrow 9, 3, 1 \end{matrix} \quad \checkmark$$

$$a_n = 2, 9, 11, \dots \rightarrow a_n = 2 \times 9^{n-1} \quad (2) - 8$$

$$S_{10} = 09041 \quad \checkmark \quad \leftarrow r \left(\frac{r^{10} - 1}{r - 1} \right) = 290854 \quad \text{الـ } r$$

$$P_n = (1 \times 3^9)^0 \quad \checkmark \quad \leftarrow \sqrt{(1 \times 3^9)^0 (1 \times 3^9)^0 (1 \times 3^9)^0} \quad (-)$$

$$a, aq, aq^r, aq^r, \dots$$

سؤال ٢

$$aq - a, aq^r - aq, aq^r - aq^r, \dots \rightarrow a(q-1), a(q^r - q), a(q^r - q^r), \dots$$

$\times q \quad \times q \quad \checkmark$

$$الف) S_n \cdot (a + a_n) \times \frac{n}{r} \rightarrow a_n \cdot a + (n-1)d \rightarrow \text{سؤال ١٠}$$

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$$(a + a + (n-1)d) \frac{n}{r} = (ra + (n-1)d) \times \frac{n}{r}$$

$$\xrightarrow{\text{إلغاء دال}} S_n \cdot a + a + d + a + r d + \dots + a + (n-1)d \quad \left. \begin{array}{l} S_n + S_n \\ r S_n \end{array} \right\}$$

$$S_n \cdot a + (n-1)d + a + (n-1)d + \dots + a$$

$$\rightarrow r S_n = ra + (n-1)d + ra + (n-1)d \rightarrow S_n \cdot (a + (n-1)d) \times \frac{n}{r} \checkmark$$

$$ب) S_n = a + aq + aq^r + \dots + aq^{n-1} \times q \rightarrow S_n q = aq + aq^r + \dots + aq^n$$

$$S_n q - S_n = a - aq^n \rightarrow S_n (q-1) = a(q^n - 1) \rightarrow S_n = a \left(\frac{1-q^n}{1-q} \right) \checkmark$$