

نام و نام خانوادگی آرشیا رحمانی پاسخنامه تشریحی تکلیف شماره کلاس دوم پایه الف

$$q=2 \quad \& a_1 = t, q^1 \Rightarrow \frac{1}{t} \times 2^9 = 2^8 = 256$$

$$\frac{a^{14}}{a^{12}} = 9^4 = 2^4 = 16 \quad (ب)$$

$$\frac{1}{t} \times 2^3 = 4, \text{ د } \textcircled{8}, \textcircled{14}, \textcircled{20}, \textcircled{26}, \textcircled{32}, \textcircled{38}, \textcircled{44}, \textcircled{50}, \frac{1}{t} \times 2^9 = 2^8 = 256 \quad (ج)$$

$$r^{n-1} = 1 \Rightarrow n-1=1 \Rightarrow n=2$$

$$128 = \frac{1}{t} \times 2^{n-1} = 2^{n-1} = 256 \Rightarrow n=9 \quad (د)$$

$$\begin{aligned} 12 &= t, q^4 \\ 94 &= t, q^7 \\ \sqrt[4]{94} &= t, q^{1.75} \end{aligned} \quad \begin{aligned} &\downarrow \times 1 \\ &\downarrow \times 1 \end{aligned}$$

$$a_1 \times a_5 = a_2 \times a_4 = (a_3)^2 \quad (الف)$$

$$\frac{((a_3)^2)^3}{a_3} = \frac{(a_3)^6}{a_3} = (a_3)^5 = 243 \Rightarrow a_3 = 3$$

$$a_1 \times a_5 = (a_3)^2 \Rightarrow a_5 = 2a \quad (ب)$$

$$r^a \times r^b = (r\sqrt{r})^2 \Rightarrow r^2 = r^{a+b} \Rightarrow 2 = a+b \Rightarrow a+b=2$$

$$r^2, 4\sqrt{r}, r^3$$

$$\frac{4}{r}, \textcircled{7}, 1, \textcircled{6}$$

$$1-x, x, x+1$$

$$\frac{x+1}{x} = \frac{x}{1-x} \Rightarrow (1-x)(x+1) = x^2$$

$$x+1 - x^2 - 1 = x^2$$

$$x - x^2 = x^2$$

$$x(1-x) = x^2$$

$$1-x=x$$

$$aq^0 + a = r1$$

$$aq^1 + aq = 1r$$

$$\frac{a - aq^1}{1 - q} = r. \Rightarrow a - aq^1 = r. - r.q$$

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$$a \times aq \times aq^2 = aq^3 = r4 \rightarrow aq = r$$

$$a + aq + aq^2 = 1r$$

$$a + aq^2 = 1.$$

$$1, r, q$$

$$a \times aq^2 = r$$

$$r, r, 1$$

$$a = 1$$

$$aq^2 = q$$

$$r \left(\frac{r-1}{r-1} \right) = a_1 \left(\frac{q-1}{q-1} \right) = \left(\frac{aq \cdot r1}{r} \right) r = aq \cdot r1$$

(الف)

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$$P = (a1 \times aq^2)^n = \sqrt{n} \sqrt{r^2}$$

(ب)

$$a, aq, aq^2, aq^3$$

$$a - aq, aq - aq^2, aq^2 - aq^3$$

$$a(1-q), aq(1-q), aq^2(1-q)$$

$$\times q \quad q$$

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$$S_n = \frac{n}{2} (2a + (n-1)d)$$

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

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

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

$$\frac{(n-1)n}{2} = \frac{n^2-n}{2}$$

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