

18,5

تکلیف: 15

A دهم

مدرسه نوری

$$S_r = x \rightarrow r a_r = r \rightarrow a_r = 1$$

$$a_1 \times a_r \times a_{r^2} = 4f \rightarrow a_r^r = 4f \rightarrow a_r = \sqrt[r]{4f}$$

$$1 \times \sqrt[r]{4f} \times \sqrt[r]{4f^2} = 4f \rightarrow \sqrt[r]{4f^3} = 4f \rightarrow 4f^{\frac{3}{r}} = 4f^1 \rightarrow \frac{3}{r} = 1 \rightarrow r = 3$$

$$a_1 \times a_3 \times a_9 = 4f \rightarrow a_3^3 = 4f \rightarrow a_3 = \sqrt[3]{4f}$$

$$a_1 + a_3 + a_9 = \frac{f}{9} + \sqrt[3]{4f} + \sqrt[3]{4f^2} = 21$$

$$\rightarrow q = \frac{1}{3} \quad \text{با توجه به } q \text{ باید غیر حساب باشد}$$

$$x^r + f, x^r, x^r - r$$

$$(x^r)^r = (x^r + f)(x^r - r) \quad f x^r = x^r - r x^r + f x^r - 1$$

$$x^r - r x^r + f x^r - 1 - f x^r = 0 \rightarrow x^r - r x^r - 1 = 0 \rightarrow x^r - r x^r = 1$$

$$\rightarrow x = r$$

$$a = x^r + f \rightarrow a = r^r + f = 1 \quad r x = r \times r = f \quad q = \frac{1}{r}$$

$$S_r = 1 \times \frac{1 - \frac{1}{r^n}}{1 - \frac{1}{r}} = 1 \times \frac{1 - \frac{1}{121}}{1 - \frac{1}{11}} = \frac{1014}{44}$$

$$1 + q + q^r + q^{r^2} + q^{r^3} = \frac{121}{11}$$

$$a = r f r \quad S_d = r f r \times 1 + r f r q + r f r q^r + r f r q^{r^2} + r f r q^{r^3}$$

$$r f r (1 + q + q^r + q^{r^2} + q^{r^3}) = \frac{121}{11} \times r f r = 343$$

$$1, 0, 0, 0, 0, 0, 4f$$

$$\frac{4f - 1}{4} = \frac{4r}{4} = 10, d = d \quad 1 + r d = 1 + 10, d \times r = 1 + r, d = r, d = A$$

$$1 + r, d = f, d \quad A + B = r, d$$

$$q^4 = 4f \rightarrow q = r \quad B = -1 \quad a_f = a q^r = 1 \times r^r = 1$$

$$- r f r - \frac{a d}{f}, \dots \quad 121, a_r, \dots$$

$$a_n = \frac{1}{f} n - r f \frac{1}{f} = \dots \quad a_{101} = \dots - r f + (100) \frac{1}{f} = -r f + r d = 1$$

$$1 = a q^r \quad 1 = 121 a q^r \rightarrow \frac{1}{121} = q^r \rightarrow q = \frac{1}{11}$$

$$a_1 = a \quad a_r = a q \quad a_{r^2} = a q^r \quad (1) \quad a \times a q \times a q^r = a q^r = 4f \rightarrow a q = f$$

(2)

سوال 2: (2)

سوال 4:

(1,5)

سوال 5:

(2)

$$a_r, a_v, a_q$$

$$= t_1, t_r, t_r$$

$$a+r d = a_r = a+r d \quad a_v = a+r d \quad a_q = a+r d$$

$$b^r = a \cdot c \rightarrow (a+r d)^r = (a+r d)(a+r d) = a^2 + 2 a r d + r^2 d^2 = a^2 + 2 a r d + r^2 d^2$$

$$1 \text{ rad-load} = 2 r d + 1 d^2 \rightarrow 2 r d = -2 d^2 = 2 a = 2 d \quad a = 1 d \rightarrow d = -\frac{1}{10}$$

$$q = \frac{a_v}{a_r} = \frac{a+r d}{a+r d} = \frac{a+r(-\frac{1}{10})}{a+r(-\frac{1}{10})} = \frac{1+\frac{1}{10}}{1+\frac{1}{10}} = \frac{1}{2} = q = \frac{1}{2}$$

$$d = 0$$

$$a_r, a_f, a_n = t_1, t_r, t_r$$

$$a_r = a+d \quad a_f = a+r d \quad a_n = a+r d = a, a_q, a_q^r$$

$$\left. \begin{aligned} a_f - a_r &= r d = a_q - a = a(q-1) \\ a_n - a_f &= r d = a_q^r - a_q = a_q(q-1) \end{aligned} \right\} \frac{r d}{r d} = \frac{a_q(q-1)}{a(q-1)} \rightarrow q = 2, a = \frac{1}{2}$$

$$a_{10} = \frac{1}{2} \times 2^9 = 2^8 = 128$$

$$\left. \begin{aligned} r a_r &\rightarrow r(a_q) \\ r a_r &\rightarrow r(a_q^r) \\ a_f &\rightarrow a_q^r \end{aligned} \right\} t_1, t_r, t_r$$

$$q = 2 = \text{نسبت}$$

$$r t_r = t_1 + t_r \rightarrow r \times r(a_q^r) = r(a_q) + a_q^r = r a_q^r = r a_q + a_q^r$$

$$a(r a_q^r) = a(r q + q^r) \rightarrow q(r q) = q(r + q^r) \quad r q = r + q^r$$

$$\rightarrow q^r - r q + r = 0 = (q-1)(q-r) = 0 \rightarrow q = 1 \rightarrow \text{مستبعد}$$

$$t_f = -\frac{1}{2} \times \frac{1}{2} + 2 \frac{1}{2} = \frac{1}{2}$$

$$t_n = -\frac{1}{2} \times 1 + 2 \frac{1}{2} = \frac{1}{2}$$

$$t_{12} = -\frac{1}{2} \times 12 + 2 \frac{1}{2} = -\frac{11}{2}$$

$$t_f + 12, t_n + 12, t_{12} + 12$$

$$\frac{1}{2}, \frac{1}{2}, -1$$

$$\frac{1}{2}, \frac{1}{2}, -1 \rightarrow \left(\frac{1}{2} + 12\right)^r = (-1 + 12) \left(\frac{1}{2} + 12\right) = 11^2 + 11 \frac{1}{2} = -\frac{11}{2} - \frac{1}{14}$$

$$11^2 + 11 \frac{1}{2} = 121 + 11 \frac{1}{2} = 132 \frac{1}{2}$$

$$R = \frac{-1.5 \pm \sqrt{1.5^2 - 4 \times 1 \times 0.5}}{2 \times 1} = -\frac{1}{2}$$

سوال 9 ادا

$$q = -1 + R = -\frac{3}{2}$$

$$a_r = \frac{1}{r} + R = \frac{1}{r} - \frac{1}{2} = -\frac{1}{2}$$

$$a_f = \frac{1}{f} + R = \frac{1}{f} - \frac{1}{2} = -\frac{1}{2}$$

$$q = \frac{a_r}{a_f} = \frac{-\frac{1}{2}}{-\frac{1}{2}} = 1$$

برعکس!

$$q = \frac{1}{2}$$

$$q = -\frac{1}{2} = \frac{1}{2}$$

$$a_1, a_f, a_r$$

$$a_f = a q^r, a_r = a q^r, a_1 = A, a_f =$$

$$a_1 + a_f + a_r = V r$$

$$a q^r + a q^r + A = V r$$

$$a q^r = V r - A$$

$$a q^r = V r - A$$

$$a q^r = V r - A$$

$$a q^r = A + d$$

$$a q^r = A + d$$

$$a + a(q^r - 1) = a q^r$$

$$1 + a(q^r - 1) = q^r$$

$$y = q^r$$

$$1 + a(y - 1) = y \rightarrow a y - 1 = y$$

$$(y - 1)(y - 1) = 0$$

$$\rightarrow y = 1 \text{ or } y = 1$$

$$q = 1 \rightarrow q^r = 1 \rightarrow y = 1$$

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$$q = 2 \rightarrow q^r = 1 \rightarrow y = 1$$

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$$q = 1 \rightarrow d = 0$$

$$q = 2 \rightarrow d = 1$$

$$d = a(q^r - 1) = 1 \times (1 - 1) = 0$$

$$d = V \mid q = 0$$

$$d = 0 \mid q = 1$$