

$$\left\{ \frac{1}{1} \right\}, \left\{ \frac{2}{2}, \frac{3}{3}, \frac{4}{4} \right\}, \left\{ \frac{5}{5}, \frac{6}{6}, \frac{7}{7}, \frac{8}{8}, \frac{9}{9} \right\}, \left\{ \frac{10}{10}, \frac{11}{11}, \frac{12}{12}, \frac{13}{13}, \frac{14}{14}, \frac{15}{15}, \frac{16}{16}, \frac{17}{17} \right\}, \left\{ \frac{18}{18}, \frac{19}{19}, \frac{20}{20} \right\}, \left\{ \frac{21}{21}, \frac{22}{22}, \frac{23}{23}, \frac{24}{24} \right\}, \left\{ \frac{25}{25}, \frac{26}{26}, \frac{27}{27}, \frac{28}{28}, \frac{29}{29}, \frac{30}{30} \right\}$$

د

$$n \rightarrow \left\{ \frac{1}{1}, \frac{2}{2}, \frac{3}{3}, \frac{4}{4}, \frac{5}{5}, \frac{6}{6}, \frac{7}{7}, \frac{8}{8}, \frac{9}{9}, \frac{10}{10}, \frac{11}{11}, \frac{12}{12}, \frac{13}{13}, \frac{14}{14}, \frac{15}{15}, \frac{16}{16}, \frac{17}{17}, \frac{18}{18}, \frac{19}{19}, \frac{20}{20}, \frac{21}{21}, \frac{22}{22}, \frac{23}{23}, \frac{24}{24}, \frac{25}{25}, \frac{26}{26}, \frac{27}{27}, \frac{28}{28}, \frac{29}{29}, \frac{30}{30} \right\}$$

$$b = \frac{a+c}{2} \rightarrow \frac{11+40}{2} = \frac{51}{2} = 25.5$$

$$\left\{ \frac{1}{1}, \frac{2}{2}, \frac{3}{3}, \frac{4}{4}, \frac{5}{5}, \frac{6}{6}, \frac{7}{7}, \frac{8}{8}, \frac{9}{9}, \frac{10}{10}, \frac{11}{11}, \frac{12}{12}, \frac{13}{13}, \frac{14}{14}, \frac{15}{15}, \frac{16}{16}, \frac{17}{17}, \frac{18}{18}, \frac{19}{19}, \frac{20}{20}, \frac{21}{21}, \frac{22}{22}, \frac{23}{23}, \frac{24}{24}, \frac{25}{25}, \frac{26}{26}, \frac{27}{27}, \frac{28}{28}, \frac{29}{29}, \frac{30}{30} \right\}$$

$$\frac{34+12}{2} = \frac{46}{2} = 23$$

د

$$\begin{aligned} r^k \rightarrow n = k \rightarrow 0, 1, 2, \dots & \quad a_0 = 1 \quad a_1 = 2 \quad a_2 = 4 \quad a_3 = 8 \\ -rk + f \rightarrow n = k+1 \rightarrow 1, 2, 3, \dots & \quad a_1 = 2 \quad a_2 = 4 \quad a_3 = 8 \\ \left(\frac{n}{k-r} \right) + a \rightarrow n = k+r \rightarrow 2, 3, 4, \dots & \quad a_2 = 1+a \quad a_3 = 1+a \quad a_4 = 1+a \end{aligned}$$

$$a_1 + a_2 + \dots + a_{10} = 19 \rightarrow 20 + 10a = 19 \rightarrow a = -1$$

$$a_2 + \dots + a_{10} = 10a + (1 + 2 + 3 + \dots + 9) = 10a + 45 = 19 \rightarrow 10a = -26 \rightarrow a = -2.6$$

د

$$a_0 = 1 \quad a_0 \rightarrow -\frac{1}{2} (20) + 0b + c = -10 + 0b + c = 1 \rightarrow 0b + c = 11$$

$$a_1 = 17, 2 \quad a_1 \rightarrow -\frac{1}{2} (17) + 1b + c = -8.5 + 1b + c = 17, 2 \rightarrow 1b + c = 25.5$$

$$\frac{1}{v_0} \times 15 = \frac{1}{a} \rightarrow \frac{1}{a} = \frac{1}{v_0} \times 15$$

$$\begin{aligned} vb + c & \rightarrow 2b = 25 - 11 \rightarrow 2b = 14 \rightarrow b = 7 \\ -wb + c & \rightarrow c = -1 \end{aligned}$$

د

$$\frac{1}{2} a + 5a + 1 \quad \frac{a_1}{a_0} = \frac{15}{1, 1} = 15$$

$$L_n = P_n + q$$

$$10P + q = 0 \rightarrow q = -10P$$

$$-10 \left(\frac{1}{2} d \right) = -1d$$

$$L_{10} = 10P + q \rightarrow 10 \left(\frac{1}{2} d \right) - 1d = 10d - 1d = 9d$$

د

$$a_1 - a_0 = 15$$

$$\begin{aligned} L_v = a_1 \\ L_r = a_0 \\ L_v - L_r = 15 \\ 15 = 15 \\ \frac{1}{2} d = 15 \end{aligned}$$

(۶)

$$a(a+d)^T = a(a+rd) + r(a(a+d)) = a(a+rd) + r(a+rd) = a^2 + rad + ad^T + r^2 ad = (a^2 + rad + ad^T) + r^2 ad$$

$$= 1a^2 + rad \rightarrow a^2 + rad + ad^T = 1a^2 + rad \rightarrow rad + ad^T = 0$$

$$\frac{r}{d^T} \rightarrow \frac{ra^T}{d^T} + \frac{a}{d} - a = 0 \rightarrow \Delta = 1 + \sqrt{1} + \sqrt{1} \rightarrow \frac{-1 \pm \sqrt{1}}{2} = \frac{-1 \pm 1}{2}$$

$$\frac{a}{d} = \frac{a+rd}{d} = \frac{-1 \pm 1}{2} = 0 \quad \frac{a}{d} = \frac{a+rd}{d} = \frac{-1 \pm 1}{2} = 0$$

۲

این سوال را کثرت از چپ به راست مرتبه است بین حجات به ترتیب a, b, c هستند!

راه حل این شیوه را برای سفت نوشتن

$$b = ar^T \rightarrow a = rb - c$$

$$(rb - c)^T = bc$$

$$rb^T - abc + c^T = 0 \rightarrow (b - c)(rb - c) = 0 \rightarrow \begin{cases} b = c \\ rb = c \end{cases}$$

$$a = \frac{a+rb}{r} \rightarrow b \rightarrow a = -rb$$

$$b = -b, b \rightarrow a = -1 \rightarrow ra = -r$$

۲

$$b = ar^T$$

$$a = er^T$$

$$ra = \frac{a+rb}{r} \rightarrow ra = c + rb \rightarrow rcr^T = c + rcr \xrightarrow{\text{تقسیم بر } c} rcr^T - cr - 1 = 0$$

$$\Delta = (-1)^T + 1 = 0$$

$$\frac{r+1}{r} = 1 \text{ GUE} \quad \frac{r-1}{r} = \frac{1}{r}$$

$$\frac{a}{a} = r^T \rightarrow \left(\frac{1}{r}\right)^T = \frac{1}{r}$$

۲

$$\frac{aqr^T}{(aq)^T} + \frac{a}{a^T} = r \rightarrow \frac{q^T}{a^T} + \frac{a}{a^T} = r \rightarrow ra^T = q^T + aq \rightarrow ra^T - aq - q^T = 0 \rightarrow (q-a)(q+ra) = 0$$

$$q = a \quad q = -ra$$

$$\frac{a}{a} = \frac{a}{-ra} \rightarrow 1 = \frac{1}{r}$$

۲

$$ar^T = \sqrt{ar^T}$$

$$a^T r^T = ar^T \rightarrow ar^T = 1 \rightarrow a = \frac{1}{r}$$

$$a = ar^T \cdot rv \rightarrow \frac{1}{r} \cdot r^T = r^T \cdot rv \rightarrow r = 1$$

$$a = \frac{1}{r} = \frac{1}{1}$$

$$\frac{1}{r} - \frac{1}{r} = \frac{1}{r}$$

۲

1

$$\text{دینامیکی} \rightarrow a, aq, aq^2 \quad (a, b, c)$$

$$\text{دینامیکی} \rightarrow \psi aq, \psi a, aq^2 \quad (\psi b, \psi a, c)$$

جوابتے متعاقب

$$\text{والغرض} \quad \psi aq + aq^2 = \epsilon a \xrightarrow{\div a} \psi q + q^2 = \epsilon \quad \rightarrow q = 1 \quad \times$$

$$\rightarrow q = -\epsilon \quad \checkmark$$

$$q = -\epsilon \rightarrow \frac{aq}{aq} = \frac{aq^1}{aq^2} = q^1 = (-\epsilon)^1 = -\epsilon$$