

$a_r = a + d / a_r = a + r d / a_r = a + r d$ $(a + r d)^r = a(a + r d) \times a + r(a + d) \times a$ $\hookrightarrow a(a + r d) + r a(a + d) = a a^r + 1 a d + r a^r + r a d \Rightarrow 1 a^r + 1 r a d$ $(a + r d)^r = 1 a^r + 1 r a d \rightarrow a^r + r a d^r + 1 a d = 1 a^r + 1 r a d$ $\hookrightarrow a^r + r a d^r + 1 a d - 1 a^r - 1 r a d = 0 \rightarrow \underline{r a^r + r a d - r a d^r = 0}$ $(\text{ادامہ سوال مندرجہ آخر})$ $r t^r + r t - r a = 0$	6
$a, b, c \rightarrow b - a = c - b \rightarrow r b = a + c$ $b, \frac{a}{r}, \frac{c}{r} \rightarrow \frac{a^r}{r} = \frac{c}{r} \times b \Rightarrow \frac{a^r}{r} = \frac{c b}{r} \Rightarrow a^r = b c$ $c = r b - a$ $a^r = (r b - a) b \rightarrow a^r = r b^2 - a b \rightarrow a^r - r b^2 + a b = 0$ $a = \frac{-b \pm \sqrt{b^2 - 1 a b^r}}{r} = \frac{-b \pm r b}{r} \rightarrow \cancel{a = b} \quad \boxed{a = -r b}$ $\frac{a}{r} = \frac{-r b}{r} = -b$ $\frac{c}{r} = \frac{r b}{r} = b \quad \left\{ \begin{array}{l} \frac{-b}{b} = -1 = q(xr) \quad \boxed{q = -r} \end{array} \right. \rightarrow \text{جواب}$	7
$\text{حالیہ: } a, b, c \Rightarrow b^r = a \cdot c / \frac{b}{a} = \frac{c}{b} = r \rightarrow b = a r$ $\text{حالیہ: } c, r a, r b \Rightarrow r a - c = r b - r a$ $r a - c = r b - r a \rightarrow r a - c = r b$ $r a - a r^2 = r a r \rightarrow a \neq 0 \Rightarrow r - r^2 = r \Rightarrow 0 = (r + 1)(r - 1) = 0$ $\frac{r}{r} = \frac{a r^r}{a r^r} = r = (-1)^r = -1$ $\boxed{r = -1}$	8
$\frac{a_r}{a_r^r} + \frac{a_r}{a_r^r} = r \Rightarrow \left[\frac{a_r^r}{a_r^r} = \frac{r^r}{a_r^r} \right] + \left[\frac{a_r^r}{a_r^r} = \frac{a_r}{a_r} = \frac{r}{a} \right]$ $\hookrightarrow \frac{r^r}{a_r^r} + \frac{r}{a} = r \quad \frac{t^r}{a} \rightarrow t^r + t = r$ $t^r + t - r = 0 \rightarrow (t + r)(t - 1) = 0 \Rightarrow \begin{cases} t = 1 \\ t = -r \end{cases}$ $\frac{a_r}{a_r^r} = \frac{a_r^r}{a_r} = \frac{a}{r} \xrightarrow{t=1} \textcircled{1}$ $\xrightarrow{t=-r} \textcircled{2}$	9
$a_r = \sqrt{a_r} \rightarrow a_r^r = a_r \rightarrow \boxed{q = a_r}$ $a a = r v$ $\frac{a_r^r}{a_r^r} \times a a = a a$ $a_r^r = r v \rightarrow \boxed{a_r = r}$ $\frac{1}{r} - \frac{1}{r} = \frac{r - r}{r} = \frac{1}{r} \rightarrow \text{جواب آخر}$ $a_r \times q^{-r} = a_r^{-1} = \frac{1}{a_r} = \textcircled{a_1}$ $(a_r)^{-r} = \frac{1}{a_r^r}$	10

☆ (اگر کسی سوال 4) ☆

$$\frac{-v \pm \sqrt{v^2 + v_0^2}}{1 \pm} = \frac{-v \pm \sqrt{v_0^2}}{1 \pm}$$

$$a \pm = a + v d \rightarrow \frac{a \pm}{d} = \frac{a}{d} + v = t + v$$

$$\frac{a \pm}{d} = v + \frac{-v \pm \sqrt{v_0^2}}{1 \pm}$$

نکته

$$\textcircled{1}: v + \left(\frac{-v + \sqrt{v_0^2}}{1 \pm} \right) = \frac{v_0^2 + \sqrt{v_0^2}}{1 \pm}$$

$$\textcircled{2}: v + \left(\frac{-v - \sqrt{v_0^2}}{1 \pm} \right) = \frac{v_0^2 - \sqrt{v_0^2}}{1 \pm}$$