

$$d = \frac{a_n - a_1}{n-1}$$

$$1 \quad 3 \quad 5$$

$$\{1\}, \{2, 3, 4\}, \{5, 6, 7, 8, 9\}$$

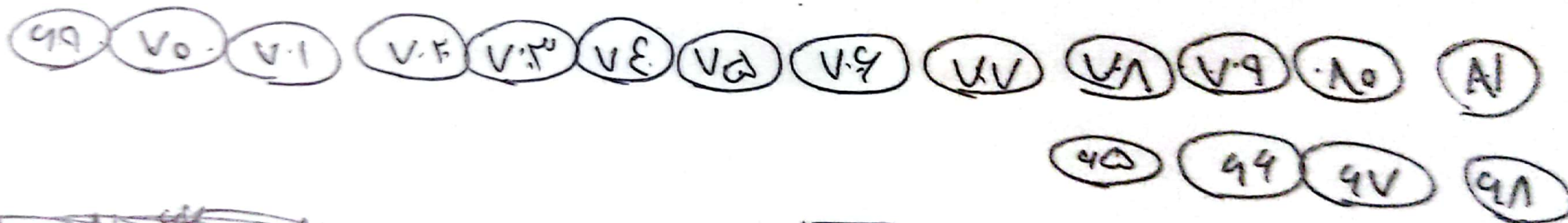
$$n + n - 1$$

$$9^2 = N$$

$$1 + 9 = 10$$

$$N \leq \text{آخرین عدد}$$

$$10 \leq \text{لغز لا اعداد}$$



$$N = 44$$

$$= 9 \quad \frac{N + 45}{2} = 44.5$$

کتابخانه صیدان  
لاهیج B

سوال 1 <= 1  
در دسته ی جمع و الگو مسابقی بین  
دو عدد اول و آخر

$$\frac{ar}{(ar)^r} + \frac{ar}{(ar)^r} = r$$

$$\frac{(ar)^r}{ar} = \frac{a_1^r}{a_1 r} = \frac{a_1}{r}$$

$$\frac{1}{r} = \frac{a_1}{r}$$

مسئله ۹

$$\frac{r^r}{(ar)^r} + \frac{r}{a_1} = r$$

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

$$\frac{r}{a_1} = \frac{1}{a}$$

$$\left(\frac{1}{a} + \frac{1}{a^r} = r\right) a^r = r \quad ra^r - a - 1 = 0$$

$$(ra+1)(a-1) = 0$$

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

$$\frac{(a_1)^r}{ar} = \left| 1 \quad \frac{1}{r} \quad -\frac{1}{r} \right|$$

مسئله ۱۰

$$\begin{array}{ccc} a & b & c \\ \downarrow & \downarrow & \downarrow \\ a_1 & a_r & ar \\ \uparrow r & \uparrow d & \end{array}$$

رابطه حساب

$$a_1 \quad a+d=b \quad a_1+d=c$$

$$a_1 = a_1 = r \quad a = b$$

$$\begin{array}{ccc} b & \frac{a}{r} & \frac{c}{r} \\ \downarrow & \downarrow & \downarrow \\ a_1 & ar & ar \\ \uparrow r & \uparrow r & \end{array}$$

رابطه

$$a_1 \quad ar = \frac{a}{r} \quad ar^r = \frac{c}{r}$$

$$a, a+d, a+rd$$

$$a+d, \frac{a}{r}, \frac{a+rd}{r} = r \quad \frac{a^r}{r} = r(a+d)\left(\frac{a+rd}{r}\right)$$

$$ar = ar + rad + ad + rd^r$$

$$\Leftarrow \frac{a^r}{r} = \frac{a^r + rad}{r} + \frac{ad + rd^r}{r}$$

$$-rd^r = rad \quad -rd \neq 0$$

$$-rd = ra$$

$$r = \frac{a}{r} = \frac{a}{a+rd} = \frac{a}{ra+ra} = \frac{a}{-a} = \boxed{-1}$$

$$ar = tr \quad t_1 = 0$$

$$t_1 + 4b = 0 \quad t_1 = -4b$$

$$\frac{t_1 + 4b}{d} = \frac{ab}{d} = \frac{rd}{d} = r$$

مسئله ۱۱

$$a_1 = tv \quad a_1 + rd = t_1 + b$$

$$a_1 + rd = t_1 + 4b$$

$$\left. \begin{array}{l} a_1 + rd = -1b \\ a_1 + rd = -4b \end{array} \right\}$$

$$rd = ab$$

$$a_1 + rd = -4b$$

~~15/5/15 1/11/15 1/11/15 1/11/15~~

$$\begin{aligned} an &= ar + br + c \\ \left. \begin{aligned} 1r &= 1a + 2b + c \\ 1v, r &= 1a + v b + c \end{aligned} \right\} - &= 1a + 2b = 1r \\ & \quad r(1a + b) = r(1v) \end{aligned} \quad \leftarrow \text{المعادلة}$$

$$C = -1$$

$a = \frac{1}{v_0} x - 1f = 4$   $a = -0.12 = 4$   $b = f$   $2\Delta(-0.12) + \Delta x \epsilon + c = 12$   
 $a_1 = -0.12 + f - 1 = 2.1$   
 $a_{1d} = -0.12 \times (1.02) + \epsilon \times 1.02 + \frac{-1}{1.02}$   
 $\frac{1.02}{2.1} = \left( \frac{1}{2.1} \right)$

$$\begin{aligned} qar &= \alpha a \gamma a + \gamma a \alpha a \\ \left. \begin{aligned} ar=0 &= \alpha a \gamma a = 0 \\ ar=1 &= \alpha a \gamma a + \gamma a = \gamma \end{aligned} \right\} \begin{aligned} a=0 \\ ar=0 \end{aligned} \end{aligned}$$

$$\frac{ar+rd}{d} \rightarrow d=1 \quad \frac{1+(-1)}{-1} = \boxed{1}$$

$$d = \frac{r}{\omega} \quad \frac{1 + \frac{r}{d}}{r} = \boxed{f_1 \omega}$$

$$\omega(ar+d)(ar-d) + r(ar-d) = 9$$

$$\omega(1-d^r) + r(1-d) = 1 \quad \omega - \omega d^r + r - rd = 1$$

$$0 = 2d^2 + 3d - 1 \Rightarrow d = \frac{-3 \pm \sqrt{17}}{4} \rightarrow d = -1$$

$$\begin{array}{ccc} a_T & , & a_E & , & a_D & = & (a_E)^T = \sqrt{V} \times \sqrt{a_E} \\ \downarrow & & \downarrow & & & & \\ \sqrt{a_E} & & a_E & , & \sqrt{V} & & \\ \sqrt{V} & & 1 & & \sqrt{V} & & \end{array}$$

$$\begin{aligned} a_{11}r &= r \\ \Rightarrow a_1 &= r \\ a_1 &= \frac{1}{r} \end{aligned} \quad \begin{aligned} \angle &= 10^\circ \\ \frac{1}{r} - \frac{1}{r} &= \boxed{\frac{1}{r}} \end{aligned}$$

$$a, b, c = 4a, ar, ar^2$$

$$\varphi b, \varphi a, c \rightarrow \varphi a^r, \varphi a, a^r = \varphi a^r = \varphi a^r \times a^r$$

$$\cancel{r} \alpha^r = \cancel{r} \alpha^r v^p$$

$$\gamma_{12} = \gamma_{21}$$

$$\frac{a_9}{a_4} = \frac{a r^1}{a r^0} = \frac{r^1}{r^0} = r^1 = r = \boxed{\frac{5}{2}}$$

 $\leq 100$

