

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

$$4 \frac{a+11}{2} = \boxed{53}$$

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

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$$\frac{111 + 1343}{2} = \boxed{727}$$

$$\frac{\frac{n}{2}(a_1 + a_n)}{n} = \frac{1}{2}(a_1 + a_n)$$



$$a_n = \begin{cases} 2k & n=2k=2, 4, 6, 8, \dots \\ -2k+1 & n=2k+1=1, 3, 5, 7, \dots \end{cases}$$

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

$$1 + 1 + 1 + \dots + 1 = 11 \cdot 1 = 11$$

$$a_0 = 1, a_2 = 2, a_4 = 4, a_6 = 8, \dots$$

$$a_1 = 1, a_3 = 2, a_5 = 4, \dots$$

$$2a + 3a = 19$$

$$\Rightarrow a = -5$$

$$a_1 = 1 + a, a_2 = 1 + a, a_3 = 1 + a, \dots$$

$$an^2 + bn + c \quad a = \frac{1}{\sqrt{0}} \cdot 1 - a_0 = -\frac{a_0}{\sqrt{0}} = -\frac{14}{\sqrt{0}} = -\frac{1}{0} = \boxed{a = -\frac{1}{0}}$$

$$n=0 \Rightarrow 0a + 0b + c = -0 + 0b + c = 14 \Rightarrow ab + c = 14$$

$$n=1 \Rightarrow 1a + 1b + c = -\frac{14}{1} + 1b + c = \frac{14}{0} \Rightarrow 1b + c = \frac{14}{0} = 14$$

$$\Rightarrow 1b + c - ab - c = 1b = 1 \Rightarrow \boxed{b = 1}$$

$$\Rightarrow \boxed{c = -1}$$

$$a_{10} = -\frac{10 \times 10}{0} + 1 \times 10 - 1 = 14$$

$$a_n = \boxed{-\frac{1}{0}a^2 + 1n - 1}$$

$$a_1 = -\frac{1}{0} + 1 - 1 = 1 - \frac{1}{0} = \frac{14}{0}$$

$$\frac{a_{10}}{a_1} = 14 \times \frac{0}{14} = \boxed{0}$$

$$t_1 + 1d, t_1 + 1d \Rightarrow 1d = 2a \Rightarrow d = \frac{2}{1}a$$

$$an + b$$

$$a_1 + (n-1)d$$

$$10a + b = 0 \Rightarrow b = -10a$$

$$n=10 \Rightarrow 10a - 10a = 0$$

$$\frac{a}{d} = \frac{a}{\frac{2}{1}a} = \boxed{1}$$

$$4a^2 = 2a + a + 1a + a$$

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$$4(a+d)^2 = 2(a+d)(a) + 1(a+d)(a)$$

$$4a^2 + 4ad + 4d^2 = 2a^2 + 2ad + 1a^2 + 1ad = 3a^2 + 3ad \Rightarrow 4a^2 + 4ad - 3a^2 - 3ad = 0$$

$$a^2 + ad = 0 \Rightarrow a(a+d) = 0 \Rightarrow a = -d \Rightarrow \frac{a}{d} = -1$$

$$a = \frac{1}{2}d \Rightarrow \frac{a}{d} = \frac{1}{2} \Rightarrow \boxed{\frac{1}{2}}$$



$$a, b, c \text{ حقیقی}$$

$$r, q ?$$

-k

$$b, \frac{a}{r}, \frac{c}{r} \text{ حقیقی}$$

$$rb = a + c \Rightarrow rb - c = a \quad \Rightarrow (bc) = (rb - c)^r$$

$$\frac{a^r}{r} = \frac{b^r}{r} \Rightarrow a^r = b^r$$

$$bc = \epsilon b^r + c^r - \epsilon bc \Rightarrow \epsilon b^r + c^r - \Delta bc = 0$$

$$\Rightarrow b = \frac{+ac \pm \sqrt{4ac^2 - 14c^2}}{\Delta}$$

$$r, q: b, -b, b$$

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

$$rq = -1$$

$$\Rightarrow b = \frac{\Delta c}{\Delta} = c \quad \text{من شود چون مقادیر 3 و 3}$$

$$\Rightarrow b = \frac{rc}{\Delta} = \frac{c}{\Delta}$$

$$\Rightarrow c = \epsilon b \Rightarrow a = -\epsilon b$$

$$\epsilon = -1, \Delta = 1$$

$$a, b, c \text{ حقیقی}$$

$$\frac{x}{y}, x, xr$$

$$rb, ra, c \text{ حقیقی} \quad rx, \frac{rx}{r}, xr$$

$$\epsilon a = \frac{rb+c}{rx} = \frac{r}{rx}$$

$$\frac{\epsilon a}{y} = \frac{rx}{y} + \frac{rx}{y} \Rightarrow \epsilon a = rx + rx^r$$

$$\epsilon a = rx + rx^r$$

$$\epsilon = rx + r^r \Rightarrow r^r + rx \cdot \epsilon = 0$$

$$(r+\epsilon)(r-1) = 0$$

$$-1 \quad 1$$

$$\frac{a^r}{ay} = r^r = (-\epsilon)^r \cdot \frac{b}{y} \quad (1)^r$$

$$(-9\epsilon) \cdot 1 \quad (1)$$

$$\frac{a^r}{a^r r^r} + \frac{a^r}{a^r} = r$$

$$\frac{r}{a^r}$$

$$\frac{V^r}{a^r} + \frac{V}{a} = r$$

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

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

$$x^r + x - r = 0$$

$$(x+r)(x-1)$$

$$x = -r \Rightarrow \left( \frac{-1}{r} \right) = \frac{a}{r}$$

$$x = 1 \Rightarrow (1) = \frac{a}{r}$$

$$a_r = \sqrt{a_r}$$

$$\Rightarrow a_r^r = a_r$$

$$a_\omega = \sqrt{v}$$

$$a_\psi, a_\epsilon, a_\omega$$

$$a_r^r, a_r^r, a_r^r \quad - (c)$$

$$(r) \quad (r) \quad (r)$$

$$(a_r^r)^r = a_r^r \Rightarrow a_r^r \cdot r = a_r^r$$

$$a_r^r = 1$$

$$a_r^r = \sqrt{v}$$

$$v^r = \sqrt{v}$$

$$\Rightarrow v = r$$

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

$$\frac{1}{r} - \frac{1}{r} = \frac{r-r}{y} = \left( \frac{1}{y} \right)$$