1-bölib. eng katta 1 ta uchburchak ichidagilar-ni hisoblaymiz.

Tomoni uzunligi

1	$12 + 2 \cdot (1+2+\ldots 11) = 144$ → 210
2	$1+2+\ldots 11 = \frac{11 \cdot 12}{2} = 66$
3	$1+2+\ldots 10 = \frac{10 \cdot 11}{2} = 55$ → 100
4	$1+2+\ldots 9 = \frac{9 \cdot 10}{2} = 45$
5	$1+2+\ldots 8 = \frac{8 \cdot 9}{2} = 36$
6	$1+2+\ldots 7 = \frac{7 \cdot 8}{2} = 28$ → 85
7	$1+2+\ldots 6 = \frac{6 \cdot 7}{2} = 21$
8	$1+2+\ldots 5 = \frac{5 \cdot 6}{2} = 15$ → 25
9	$1+2+\ldots 4 = \frac{4 \cdot 5}{2} = 10$
10	$1+2+\ldots 3 = \frac{3 \cdot 4}{2} = 6$
11	$1+2 = \frac{2 \cdot 3}{2} = 3$ → 10
12	$1 = 1 = 1$

= 330

endi; ABCDEF — 6 ti burchak ichidagi $\triangle$ larni sanaymi'

1   →   96 ta

2   → $5+6+ \cancel{7+7+6}+5 = 36$

3   → $5+6+6+5 = 22$

4   → $5+5 = 10$

$$\stackrel{+}{=} 96+36+22+10 =$$
$$= 132 + 32 = 164 \text{ ta}$$

demak 164 ta uchburchak umumiy

$$300 + 300 - 164 = 600 - 164 = 436. \text{ ta uchburcha,}$$

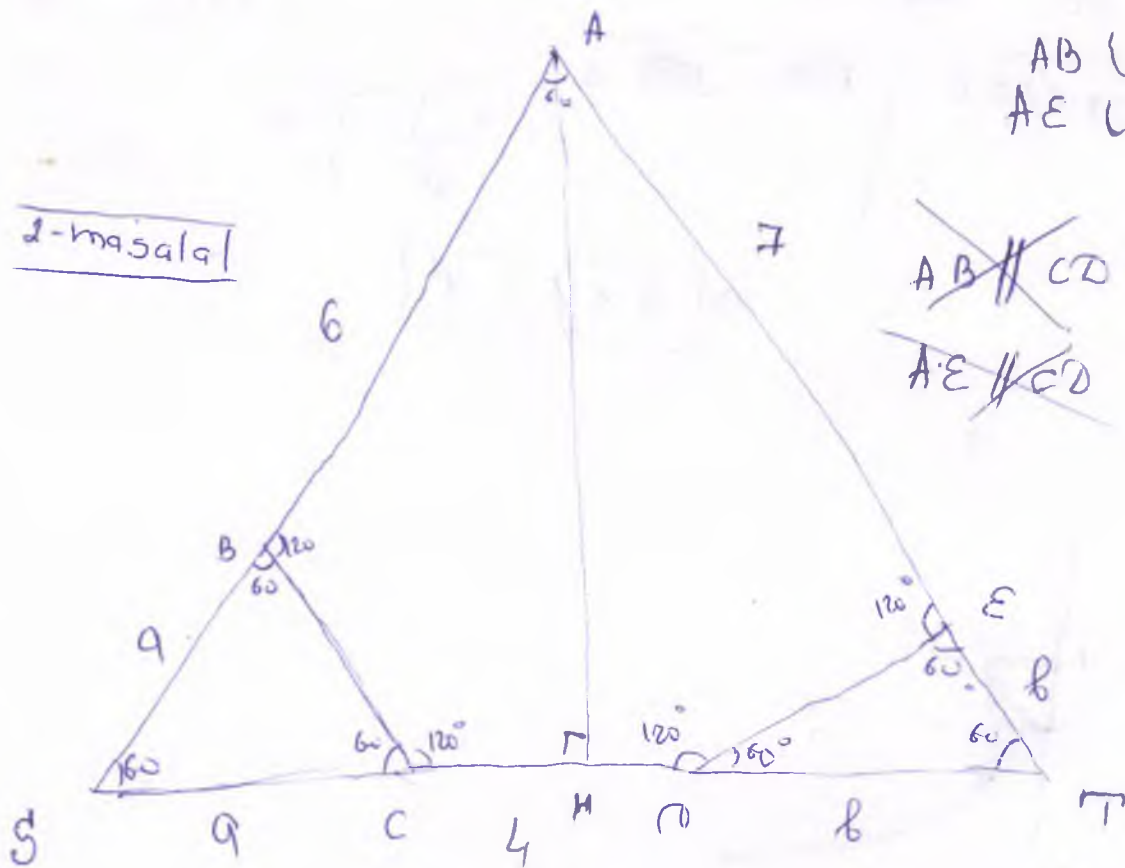Emdi: qo'shgan chiziqlarimizn; o'z ichiga olgan $\triangle$ larni

Sanaymit

$$6 \left(2 \cdot (4+3+2+1) + 2(3+2+1) + 2(2+1) + 2 \cdot 1 \right) = 6 \cdot 2 (10+6+3+1)$$

$$= 12 \cdot 20 = 240.$$

Shunda $\quad 436 - 240 = \boxed{236}$ ta

$$\mathcal{J}: 236$$

$AB \cup CD = S$

$AE \cup CD = \pi$

~~$AB \parallel CD \Rightarrow$ chunki $\angle ABC + \angle BCD \neq 180$~~

~~$AE \parallel CD \Rightarrow$ chunki $\angle AED + \angle EDC \neq 180$~~

A

7

6

B 120°
60°

9

160°

120° E
60°
b

120°

60° 120°   120° 60°
160°   160°

60°

S   9   C   4   H   П   b   T

$180° - \angle ABC = \angle CBS' = 60°$

$180° - \angle BCD = \angle BCS' = 60.$

$\Rightarrow \quad \triangle BSC \Rightarrow$ muntazam

xuddi shunday $\triangle DET \Rightarrow$ muntazam

⚡ва $\triangle AST$ e muntazam

$\Rightarrow BS' = SC = 9$ $a + 6 = b + 7 \Rightarrow a = b + 1$ $a = 3$
$DT = TE = b$ $a + 6 = a + b + 4 \Rightarrow b = 2$ $b = 2$

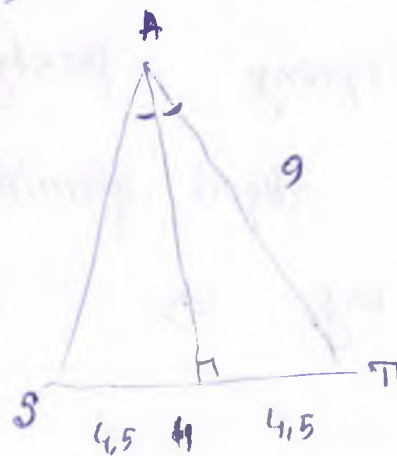Demak $\boxed{AS' = ST = AT = 9}$

A

9

S   4,5 H   4,5   T

$AH \Rightarrow$ balandlik, bissektrisa, mediana

$\Rightarrow \quad AH^2 = HT^2 + AT^2 = (4,5)^2 + 9^2 =$

$= 20,25 + 81$

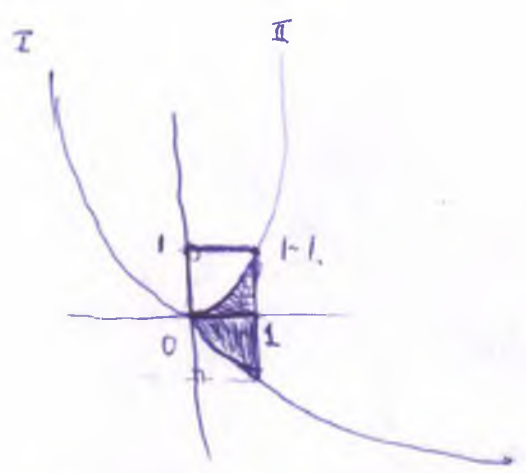$AH^2 = 100,25$

$AH = \sqrt{100,25} = \dfrac{\sqrt{401}}{2}$

J: $\dfrac{\sqrt{401}}{2}$.

3. $(y + \sqrt{x})(y - x^2)\sqrt{1-x} \leq 0$ tenglikda $\sqrt{y}, \sqrt{1-x}$, bor $\Rightarrow$ $\begin{aligned} x \geq 0 \\ x \leq 1 \end{aligned}$ $\Rightarrow 0 \leq x \leq 1$

$\sqrt{1-x} \geq 0 \Rightarrow (y + \sqrt{x})(y - x^2) \leq 0$

$\sqrt{x} \geq 0$.

$\Rightarrow$

$$\boxed{-\sqrt{x} \leq y \leq x^2}$$

$y = x^2$

$\boxed{y = -\sqrt{x}}$

$y = \sqrt{x}$ va $y = -\sqrt{x}$ $\Rightarrow$ $x = y^2$ demak $y = -\sqrt{x}$ funksiya

$y = x^2$ funksiyaning 2-qismiga teng.

$\Rightarrow$ $y = x^2$ funksiyaning 2 qismini $90°$ ga bursak

$y = -\sqrt{x}$ funksiya hosil bõladi.

$\Rightarrow$ X õqining pastgi qismidagi boyalgan yuza,

X õqining yuqori qismidagi ajratib kõrsatilgan boyalmagan

yuzaga teng $\Rightarrow$ $S = 1 \cdot 1 = 1$ birlik kb.

$J: 1$ birlik kb.

4) 1 ta bola eng kopi b-n $N-1$ ta sovğa tarqatishi mumkin.

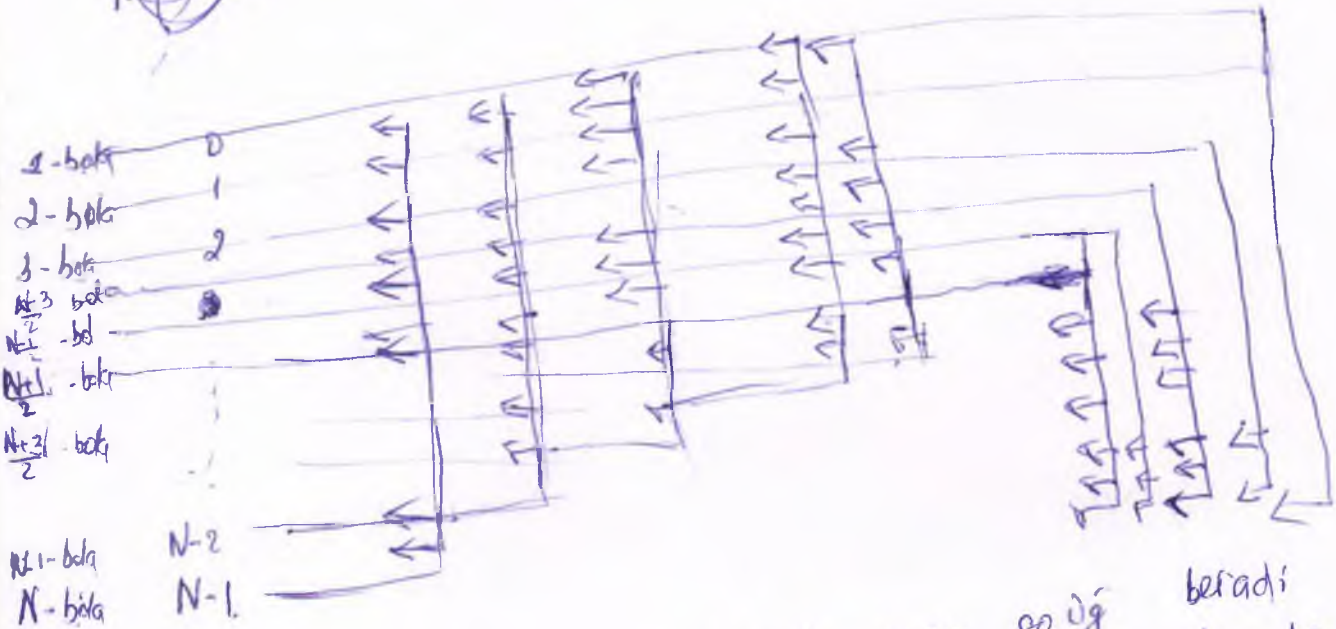va bizda bolalar tarqatgan sovğalar soni harxil bōlishi kerak demak $N-1$ dan katta bōlmagan N ta harxil sonni tanlash fağat birxil bōlishi mumkin

$$0, 1, 2, 3, 4, \ldots \quad N-2, N-1$$

Jami $\dfrac{(N-1)N}{2}$ ta
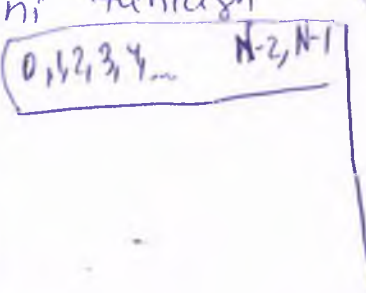
1-ta bolaga $\dfrac{(N-1)N}{2}$; $N = \dfrac{N-1}{2}$ ta

$\dfrac{N-1}{2} \in N \Rightarrow \boxed{N \in \text{tq}}$

bu holat bolishi mumkinligini kōrsatamiz.

$$N - \frac{N-1}{2} = \frac{N+1}{2}$$

1-bola — 0
2-bola — 1
3-bola — 2
$\frac{}{}$+3 bola — 3
$\frac{N}{2}$-bd
$\frac{N+1}{2}$-bola
$\frac{N+3}{2}$-bola
$\vdots$
$\frac{}{}$1-bola — $N-2$
N-bola — $N-1$

demak bunda N-bola ōzidan yuqoridagi hammaga sovğ beradi va $N-1$-bola ōzidan yuqorida hammaga sovğa beradi va $\dfrac{N+1}{2}$-bola...

bu holat $\dfrac{N+1}{2}$ gacha tacla takrorlanadi va $\dfrac{N-1}{2}$ bola esa ōzidan pastdagi barchaga beradi, $\dfrac{N-1}{2}$ bol esa esa ōzidan pastdagi barchaga beradi, $\dfrac{N-3}{2}$-bola esa $\dfrac{N+5}{2}$ dan pastdagi

$\dfrac{N+3}{2}$ dan pastdagi barga,

barchaga, da hosato 2- bola esa N - bolaga beradi
ghunda hammada $\dfrac{N-1}{2}$ tadan sodga baadi.

J: Netog $\boxed{N+1}$

⑤ $m^3 = n^3 + 13n - 273$

$m^3 - n^3 = 13(n - 21)$

$(m-n)(m^2 + mn + n^2) = 13(n-21)$

I hal

$m - n = 13k$ $k, m \in b \ne tan$

$m = n + 13k$

$\boxed{\text{II hal} \qquad m^2 + mn + n^2 = 13 \&}$

$(n+13k)^2 + (n+13k)n + n^2 = kn - 21k$

$3n^2 + 38kn + 169k^2 + 21k = 0$

$\oslash = (38k)^2 - 12(169k^2 + 21k) =$

$= \lvert -584k^2 - 252k \rvert = t = a^2$

$[t_0] = 87$

$a^2 < 87$

$a^2 = 81$ $584t^2 + 252k - 81 = 0$ $k \in butun$

$D = 252^2 - 4 \cdot 4 \cdot 146 \cdot 81 = 16(113 \cdot 133 - 146 \cdot 81) \ne \ell^2 \quad \emptyset$

$a^2 = 64 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 49 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 36 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 25 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 16 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 9 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 4 \quad \oslash \ne \ell^2 \quad \emptyset$

$a^2 = 1 \quad \oslash \ne \ell \quad \emptyset$

$a^2 = 0 \quad \oslash = 0 \quad \boxed{k = 0}$

$k = -\dfrac{252}{584} \notin butu \Rightarrow \emptyset$

$$m - n = 0$$
$$\underline{m = n}$$

$$n^3 = n^3 + 13n - 273$$

$$13n = 273$$
$$\boxed{n = 21}$$

$$2hol \quad m^2 + mn + n^2 = 13k. \qquad 0 = n^2 - 4n^2 + 52k =$$

$$(m-n) \cdot 13k = 13 \cdot (n - 21) \qquad \qquad = 52k - 3n^2.$$

$$(m-n) \, k = n - 21 \qquad \qquad m^2 + m^2 + 2nm - 21km + m^2 + 441 + 441k^2$$

$$\frac{mk + 21}{k+1} = n \qquad \qquad + 42m - 42km - 882k - 13k = 0$$

$$\frac{mk + m + 21 - m}{k+1} = n \qquad 3m^2 + m(63 - 63k) + 441k^2 - 895k + 441$$
$$= 0$$

$$m + \frac{21 - m}{k+1} = n.$$

$$m + \frac{21 + 21k - m - 21k}{k+1} = n$$

$$m + 21 - \frac{m + 21k}{k+1} = n$$

$$\underline{m = 21} \qquad m + 21 - \frac{21 + 21k}{k+1} = n$$

$$\boxed{h = m = 21}$$

$$w = 21k^2 \qquad m + 21 - \frac{21k(k+1)}{k+1} = n \qquad \boxed{h = m + 21 - 21k}$$

$$Ji \quad 21$$