



Фиксация санитарных выходов:

1 выход:	14 ⁵⁵	возвращение:	14 ⁵⁸
2 выход:		возвращение:	
3 выход:		возвращение:	
4 выход:		возвращение:	
5 выход:		возвращение:	

Время окончания:

15 ²³

Всего листов:

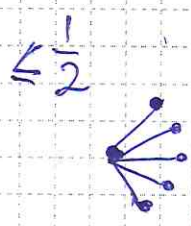
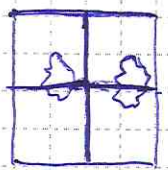
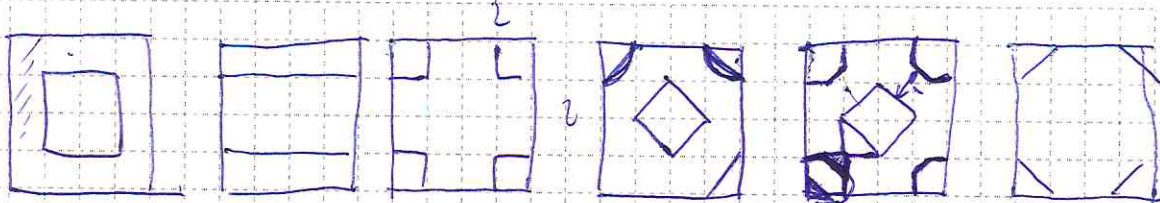
6

1.1. $B \cap M'$ - подходит (M' - ср. обш. из M).

1.2. X

A - множество незначащих
и слов из M' .

$A \cup B$ - обобщенная
 $B \cap A \cup C$



$40 \geq 10! - 4^{10} \geq 10$

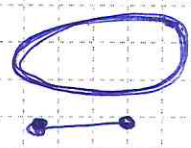
$\frac{2-\sqrt{2}}{2} \cdot \sqrt{2} = \sqrt{2}-1$
 $1 - (\sqrt{2}-1)^2 = 1 - (2 - 2\sqrt{2} + 1) = 2\sqrt{2} - 2$

$na - nb = (n-4)a + 4(a-b) \geq 4n \geq n^2$

$(na - nb) \cdot (2\sqrt{2}-2) + 1 = 8\sqrt{2} - 7$

$n(a-b) + (n-4)b \geq 4n^2 > 4n+4$ при $n \geq 2$

$6 - 4^3$
 $4! - 4^4$
 $5!$



~~$8! - 4^6 = 720 - 256 > 4 \cdot 6$~~

$8\sqrt{2} - 7$? $2, 5 - \sqrt{2}$

$6! - 4^6 < 0$

$128 + 49 - 132\sqrt{2}$? $6, 25 - 5\sqrt{2} + 2$

$7! - 4^7 = 720 \cdot 7 - 2^{14} = 5040 - 16 \cdot 1024$

$8! = 5040$

$8 \cdot 5040 - 2^{16}$
 $720 \cdot 720 \cdot 7 - 2^{20}$

$720^2 \cdot \frac{7}{10} - 1024^2 \cdot \frac{1}{4}$

$$\begin{array}{r} 5040 \\ 40320 \\ \hline 2^{16} \end{array}$$

$720^2 \cdot 7 - 2024^2$
 ~~$(720\sqrt{7} - 1024)(720\sqrt{7} + 1024)$~~

$135 = 3 \cdot 45$

$27^2 \cdot 25^2$

$107 =$

$(720 \cdot \sqrt{\frac{7}{10}} - 1024 \cdot \frac{1}{2}) (\dots)$

$720 \cdot \sqrt{\frac{7}{10}} \cdot 526$
 ~~$720^2 \cdot \frac{7}{10} - 1024^2 \cdot \frac{1}{4}$~~

107
 749
 107
 11449
 676

- 2x
- 3x
- 5x
- 4x
- 11x

$\frac{\sqrt{7}}{\sqrt{10}} \cdot \frac{9}{4}$

$720 \cdot \frac{3}{4} \cdot 526$

$(150 + 30) \cdot 3 =$

$\frac{7}{10} > \frac{9}{16}$
 $7 \cdot 16 > 9 \cdot 10$

455625

675^2
 52
 675
 675
 3375
 4725
 4050
 455625

$$\frac{2-\sqrt{2}}{2} : \cos 45^\circ = \frac{2\sqrt{2}-2}{2} = \sqrt{2}-1$$

$$1 - (\sqrt{2}-1)^2 = 1 - (2 - 2\sqrt{2} + 1) = 2\sqrt{2}-2$$

$$(2\sqrt{2}-2) \cdot 4 + 1 = \boxed{8\sqrt{2}-7}$$

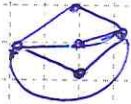
$$8\sqrt{2}-7 ? 2,5-\sqrt{2}$$

$$128+49-112\sqrt{2} ? 6,25+2-5\sqrt{2}$$

$$128+40,75 ? 107\sqrt{2}$$

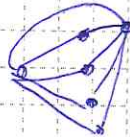
$$168,75 ? 107\sqrt{2}$$

$$168 \frac{3}{4} ? 107\sqrt{2}$$



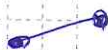
$$\frac{675}{4} ? 107\sqrt{2}$$

$$\frac{675^2}{16} ? 107^2 \cdot 2$$



$$\begin{array}{r} 11449 \\ 32 \\ \hline 343478 \\ 68 \end{array}$$

$$\frac{675^2}{32} = 107^2 ? 0$$



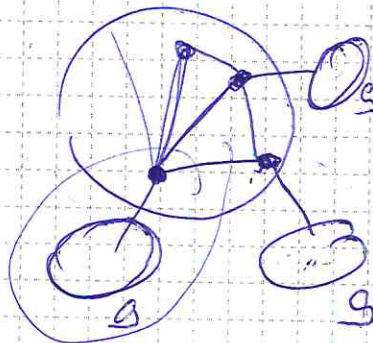
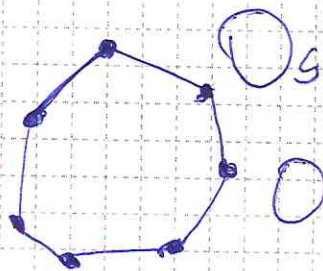
$$675^2 = 107^2 \cdot 32 ? 0$$

$$27^2 \cdot 25^2 = (26-1)^2$$

$$1 - \left(\frac{2-2\sqrt{2}+1}{2} \right) = 1 - 1 + \sqrt{2} + \frac{1}{2} = \sqrt{2} - \frac{1}{2}$$

$$4\sqrt{2}-2+1 = 4\sqrt{2}-1$$

$$\boxed{4\sqrt{2}-1} = 18 + 24\sqrt{2} - 16 = 28\sqrt{2}-35$$



$$2\sqrt{2} - \frac{\sqrt{2}}{2} ? 2$$

$$\sqrt{2} \left(2 - \frac{1}{2} \right) ? 2$$

$$2 \left(4 - 2 + \frac{1}{4} \right) ? 4$$

$$2 \left(\right)$$

$$\left(2\sqrt{2} - \frac{\sqrt{2}}{2} - 2 \right) \cdot \sqrt{2} =$$

$$= 4 - 1 - 2\sqrt{2}$$

$$\frac{(9-2\sqrt{2})^2}{2} \cdot 4 = 2(9-2\sqrt{2}+8)$$

$$\begin{aligned} 1 - \frac{1}{2} \left(\left(1 - \frac{\sqrt{2}}{2} \right) \cdot \sqrt{2} \right)^2 &= \\ = 1 - \frac{1}{2} (\sqrt{2}-1)^2 &= \\ = 1 - \frac{1}{2} (2-2\sqrt{2}+1) &= \\ = 1 - \frac{3}{2} + \sqrt{2} = \sqrt{2} - \frac{1}{2} &= \\ \left(\sqrt{2} - \frac{1}{2} \right) \cdot 4 + 1 = \boxed{4\sqrt{2}-1} & \end{aligned}$$

$$\frac{\left(2\sqrt{2} - \frac{\sqrt{2}}{2} - 2 \right) \cdot \sqrt{2}}{2} =$$

$$= \frac{(4-1-2\sqrt{2})^2}{2} =$$

$$= \frac{(3-2\sqrt{2})^2}{2} = \frac{9-12\sqrt{2}+8}{2}$$

$$\cdot 4 = 18 - 24\sqrt{2} + 16$$

$20 \sqrt{2} - 35 ? 2,5 - \sqrt{2}$

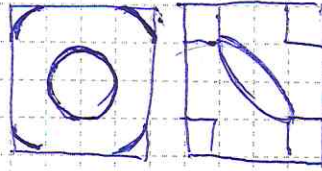
$29 \sqrt{2} ? 32,5$

$29 \sqrt{2} ? 35$

$243 \cdot 2 ? \frac{25 \cdot 27}{4}$

$243 ? \frac{25 \cdot 27}{4}$

$243 ? \frac{625}{8}$



$n! - 4^n$

$8! - 2^{16}$

$na - nb = (n-1)a + a(a-b) \geq 4n$, если верно для $n-1$
и $n > 4$ $(n-1)! - 4^{n-1} \geq n$

$8! = 40320$

(40320)

$40320 - 2^{16}$

$\begin{array}{r} 33 \\ \times 256 \\ \hline 256 \\ 1536 \\ 1280 \end{array}$

$\begin{array}{r} 512 \\ 526336 \end{array}$

$1 - 4 < 0$

$2 - 16 < 0$

$n-1 \geq n$

$(n-1)! - 4^{n-1} \geq n-1$

$1024 \cdot 64 > 40000$

$9! = 320 \cdot \frac{7}{10}$

72

72

144

504

$\times 5184$

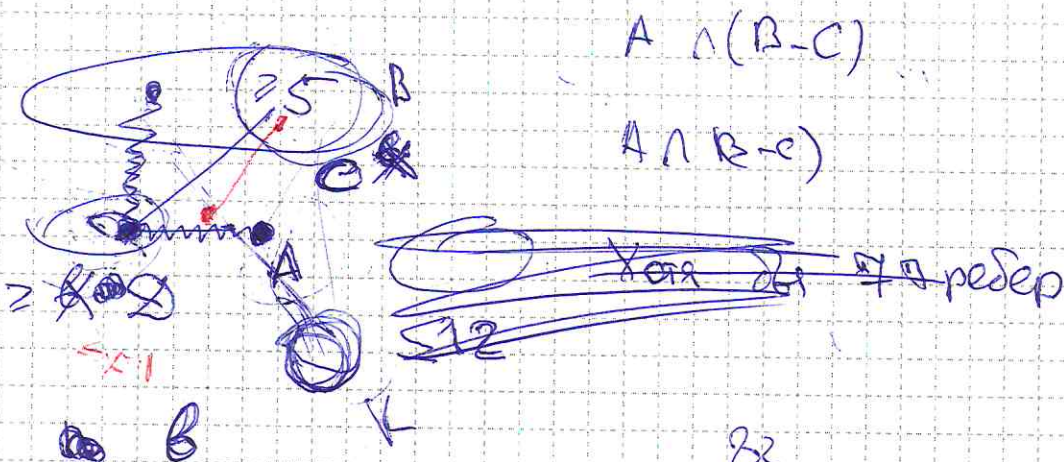
36288

$51840 \cdot 7 ? 1024 \cdot 256$

$362880 ? 256000 + 24 \cdot 256 < 256000 + 12000$

$362880 - 2^{18} \Rightarrow 36$

$256 \cdot 50 = 12800$



$$\frac{82-b}{17-b} \geq 6$$

~~82-b~~

$$82-b \leq 17b - 6^2$$

$$b^2 - 18b + 82 \leq 0$$

$$D = 18^2 - 4 \cdot 82 \leq 0$$

$$18^2 = 324 - 328$$

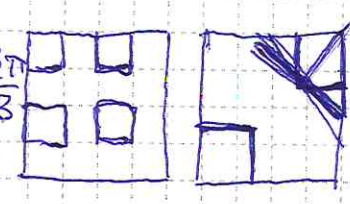
$$\frac{82}{18}$$

$$\frac{82-x}{17-x} \leq x$$

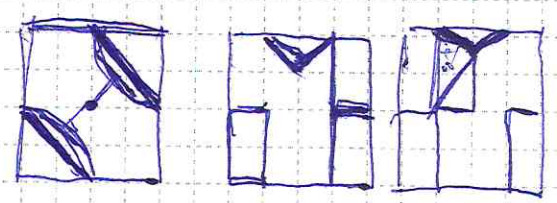
$$82-x \leq 17x - x^2$$

$$x^2 - 18x + 82 \leq 0$$

$$2 + \frac{\pi^2}{36} + \frac{3}{16} - \frac{\sqrt{6}}{2} - \frac{\sqrt{2}\pi}{3} + \frac{\sqrt{3}\pi}{12} - \frac{1}{4}$$



$$2\sqrt{2} - 2 \quad 2\sqrt{2}/3$$



$$\frac{1}{2} - \pi \cdot \frac{30^\circ}{360} - \frac{\sqrt{3}}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} =$$

$$= \frac{1}{2} - \frac{\pi}{12} - \frac{\sqrt{3}}{8}$$

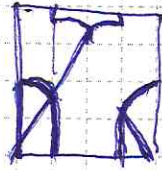
$$1 - \frac{\pi}{6} - \frac{\sqrt{3}}{4}$$

$$1 - \frac{\sqrt{3}}{2} = \frac{2-\sqrt{3}}{2}$$

$$1 + 1 - \frac{\pi}{6} - \frac{\sqrt{3}}{4} \quad ? \quad 2,5 - \sqrt{2}$$

$$- \left(\frac{\pi}{6} + \frac{\sqrt{3}}{4} - \sqrt{2} \right) \quad ! \quad 0,5$$

$$2 \frac{\sqrt{3}}{16} + \frac{\pi^2}{36} + \frac{\sqrt{3}\pi}{12} \cdot \frac{1}{4}$$



$$\left(\frac{\sqrt{3}}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} + \pi \cdot \frac{30^\circ}{360^\circ} \right) \cdot 2 = \frac{\sqrt{3}}{4} + \frac{\pi}{6}$$

$$\frac{\sqrt{3}}{2} + 2 = \sqrt{3} \quad 2 - \sqrt{3}$$