

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

1	5	9	13
2	6	10	14
3	7	11	15
4	8	12	16

5	9	13	1
6	10	14	2
7	11	15	3
8	12	16	4

9	13	5	1
10	14	6	2
11	15	7	3
12	16	8	4

13	9	5	1
14	10	6	2
15	11	7	3
16	12	8	4

$$1+2+\dots+(n-1)=(1+n-1)*(n-1)/2=n(n-1)/2$$

$$n*(n-1 + n-2 + \dots + 1)=n*n(n-1)/2=O(n^3)$$

$(n-1)*n$  - повернуть внешний слой

$$(n-1)*n + (n-1)/2*n/2+(n-1)/4*n/4+\dots=$$

$$=(n-1)*n*(1+1/2^2+1/2^4+\dots)=(n-1)*n*(1*(1-1/2^n)/(1-1/2))$$

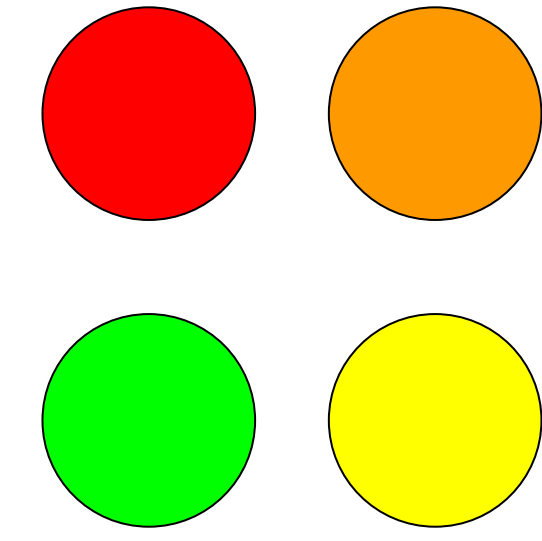
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

13	9	5	1
14	10	6	2
15	11	7	3
16	12	8	4

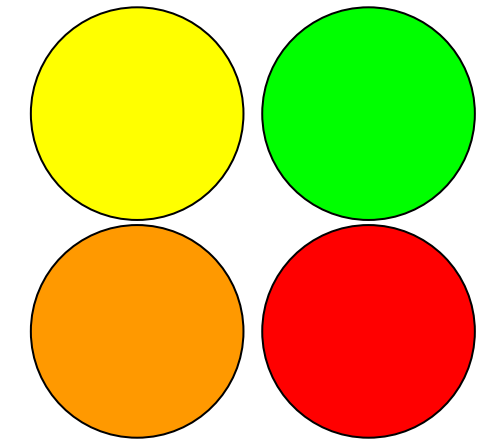
```
MM[i][j]=1
MM[j][roww-1-i]=4
MM[roww-1-i][roww-1-j]=16
MM[roww-1-j][i]=13
```

115.373

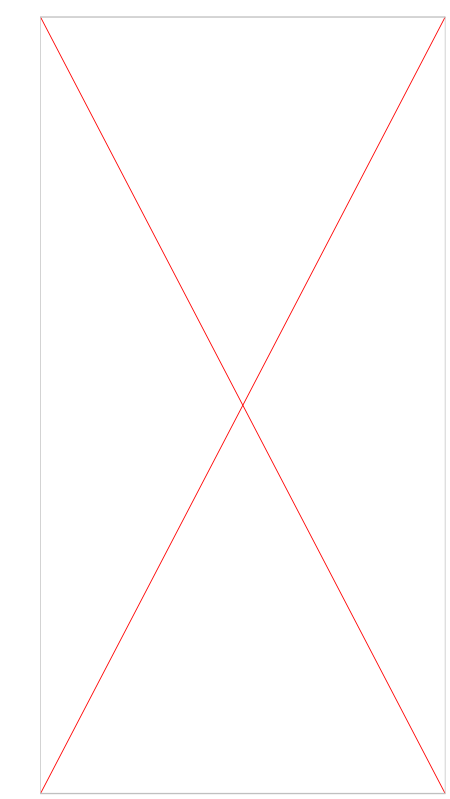
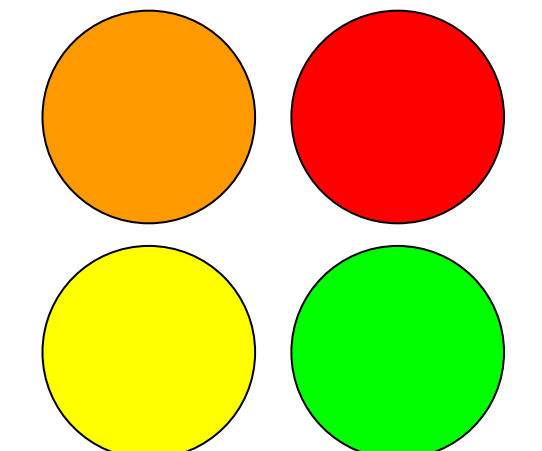
original



center



axial



<https://spark.ru/startup/redaksiya-sparak-ru/blog/94093/silikon-ovaya-dolina-ne-mesto-dlya-molodih>