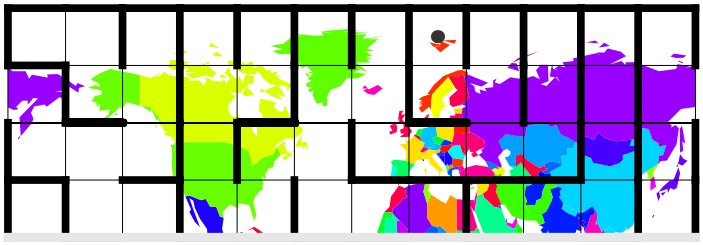
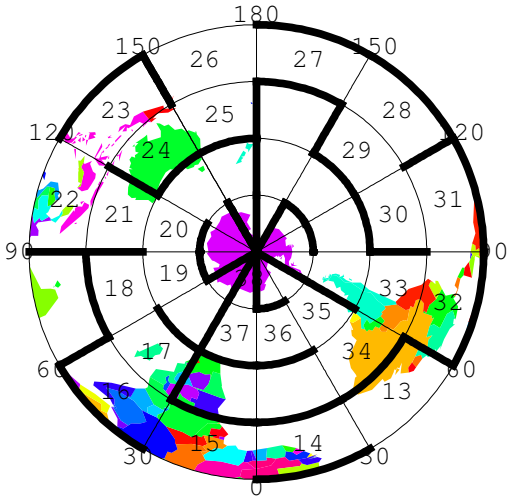
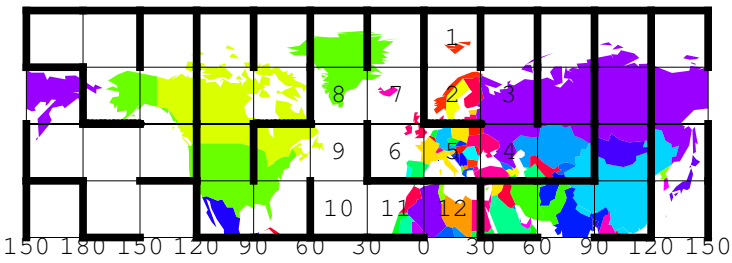
Izidor Hafner

Maps as Mazes

Azimuthal+Rectangular

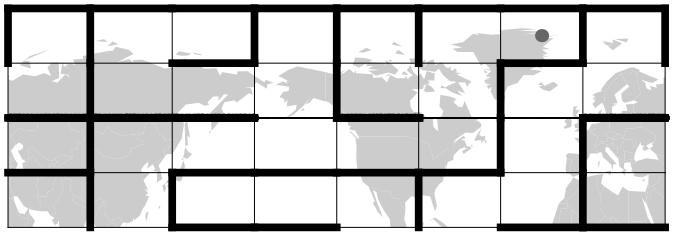




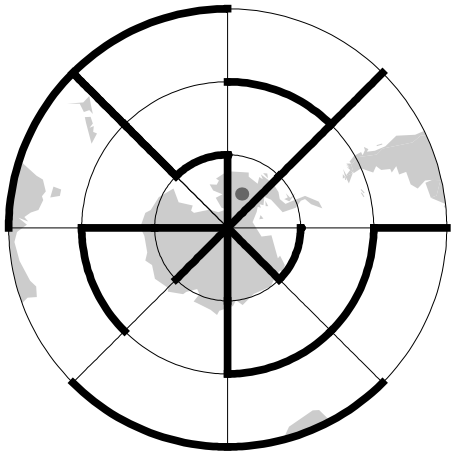


Problems

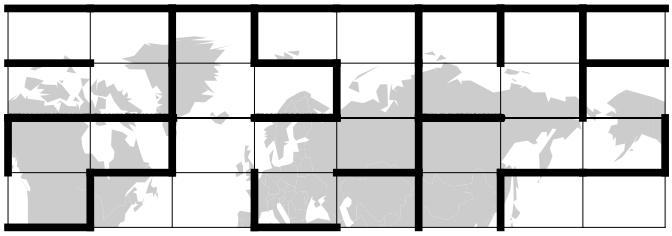
1.



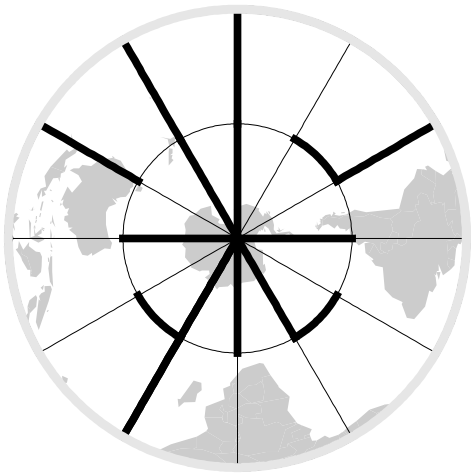
2.

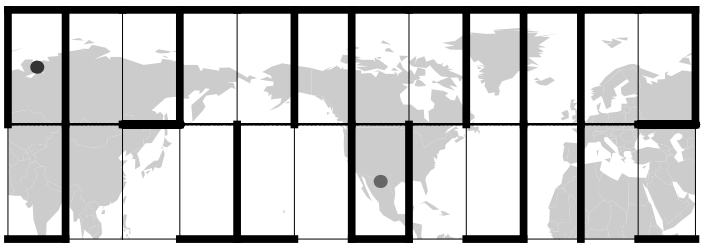


3.

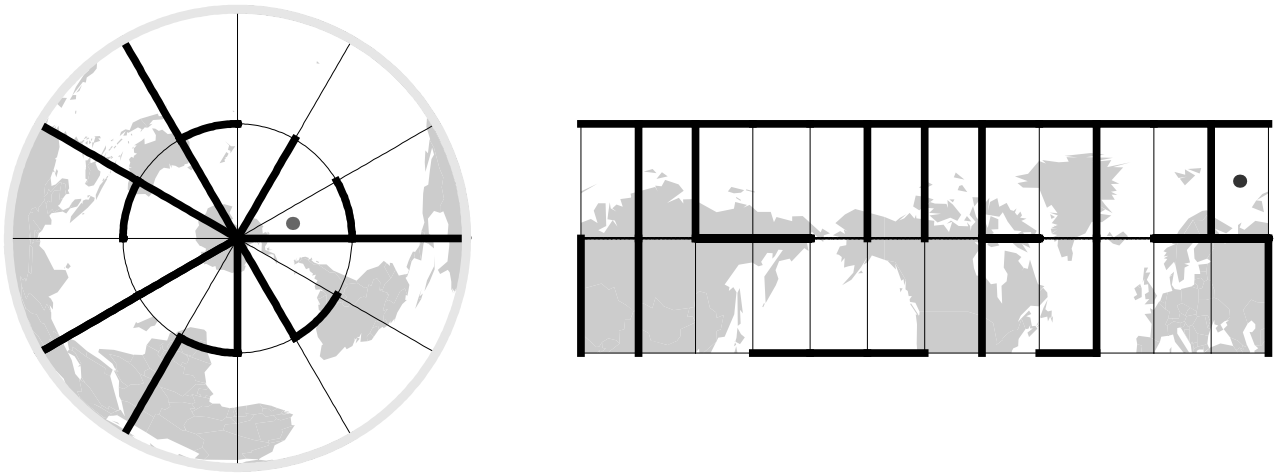


4.

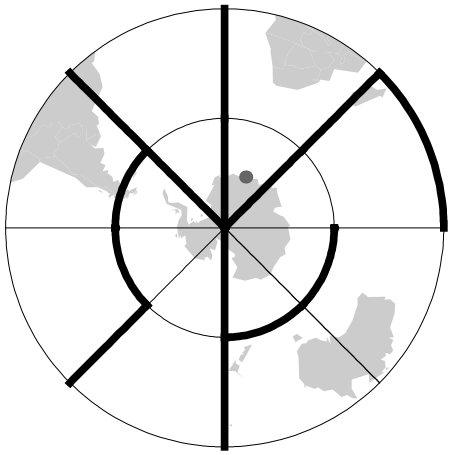


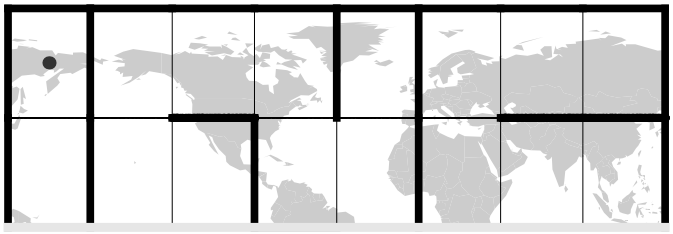


5.

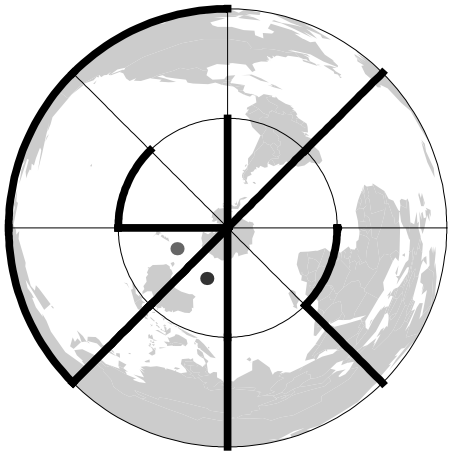


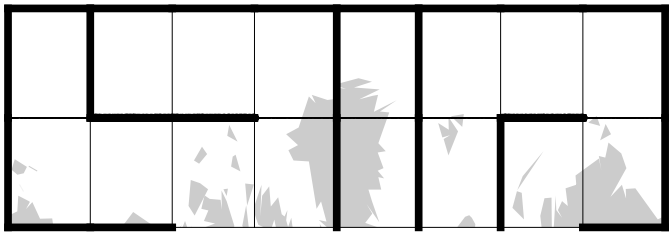
6.



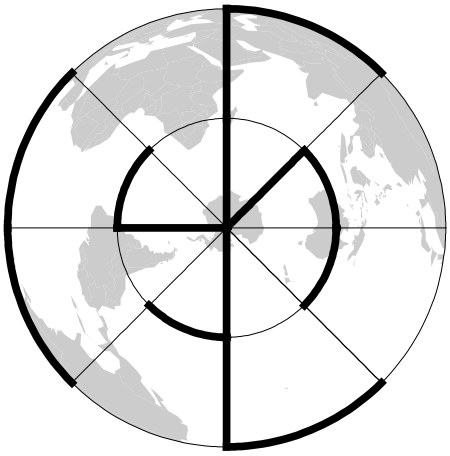


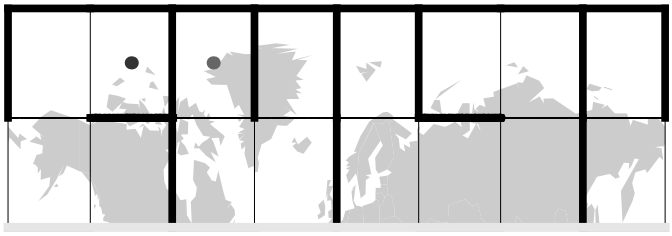
7.



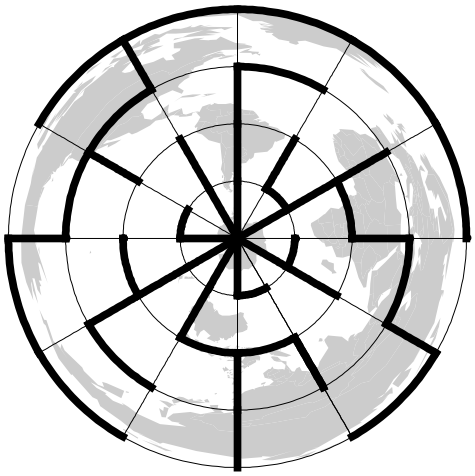


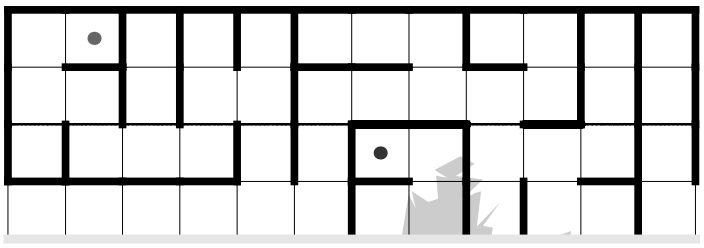
8.



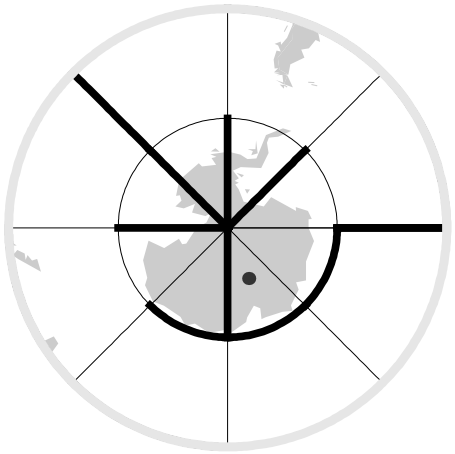


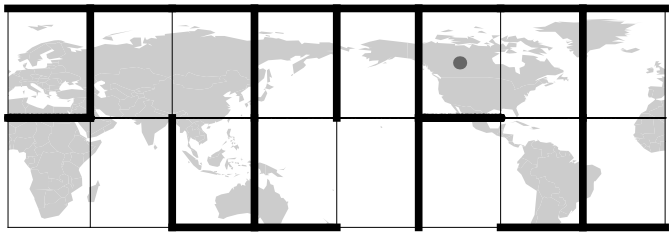
9.



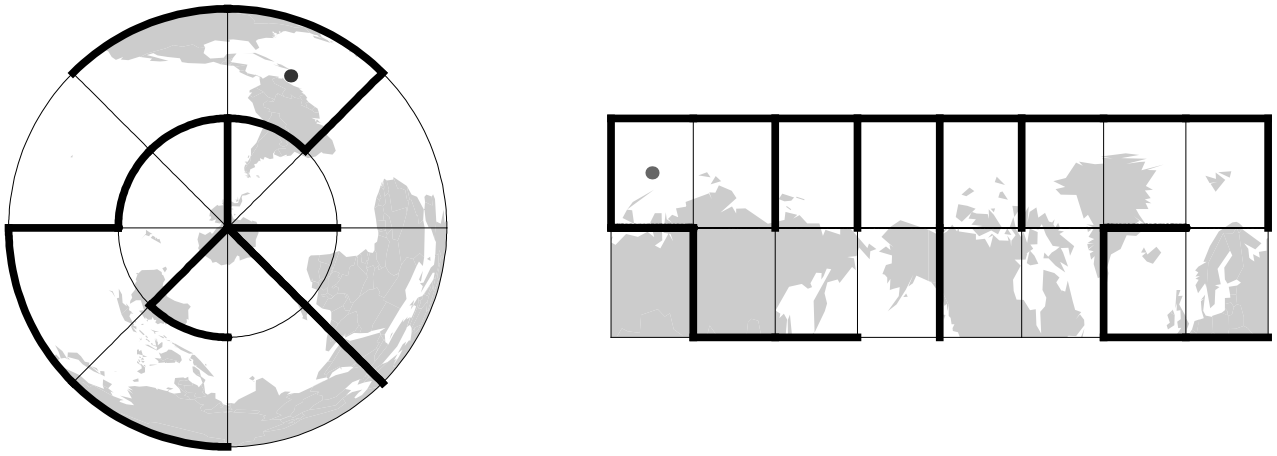


10.

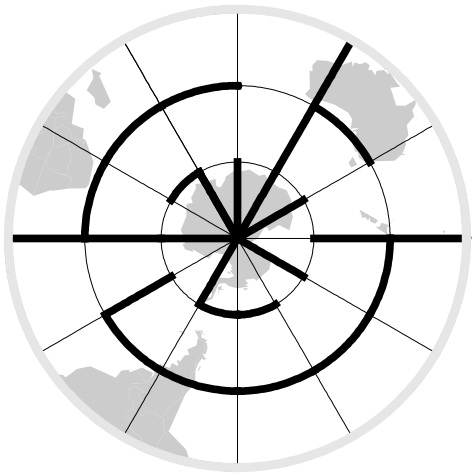


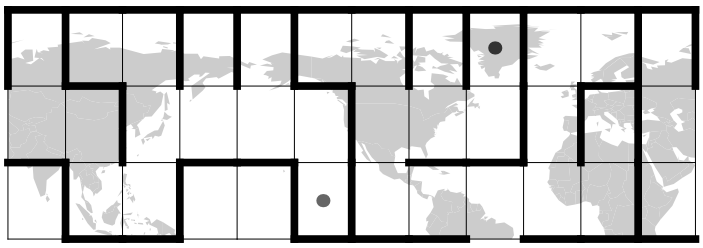


11.

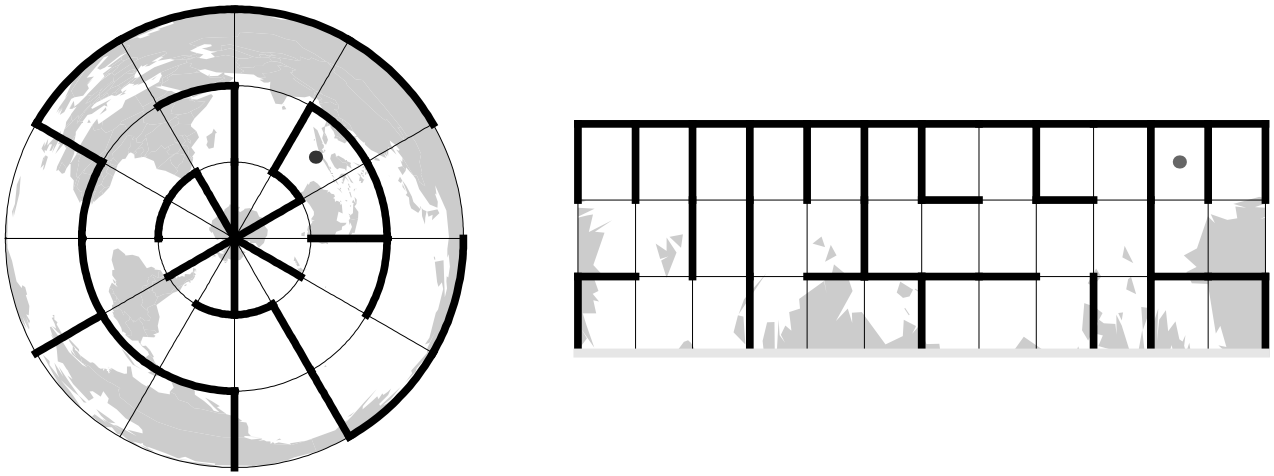


12.

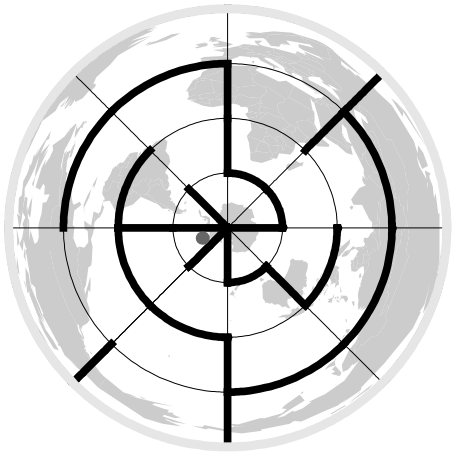


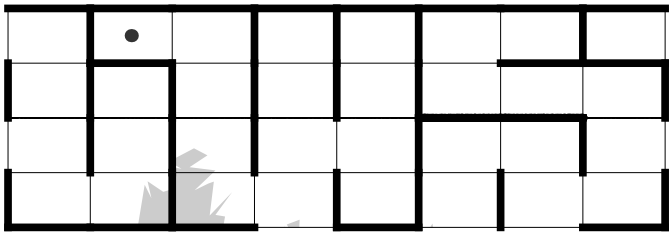


13.

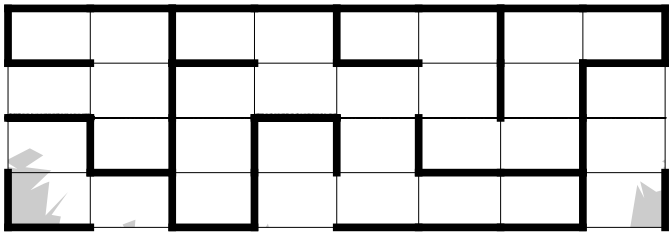


14.



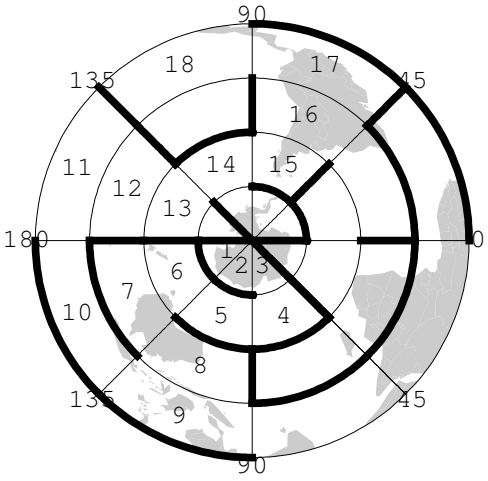


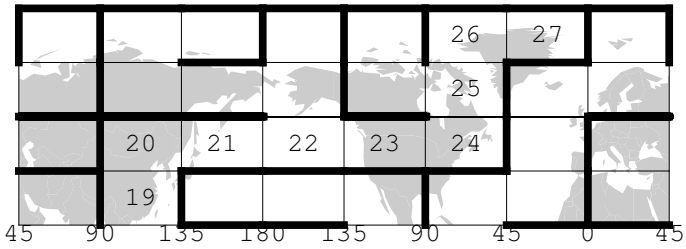
15.



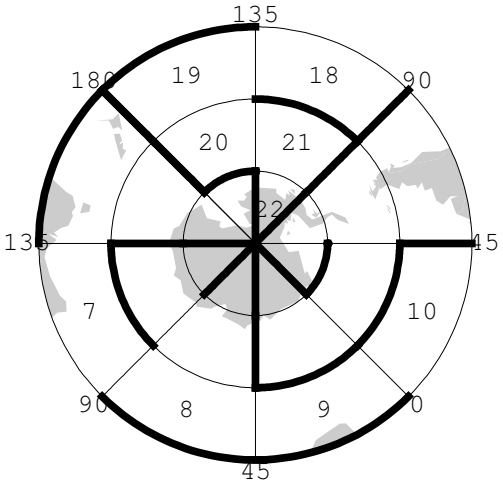
Solutions

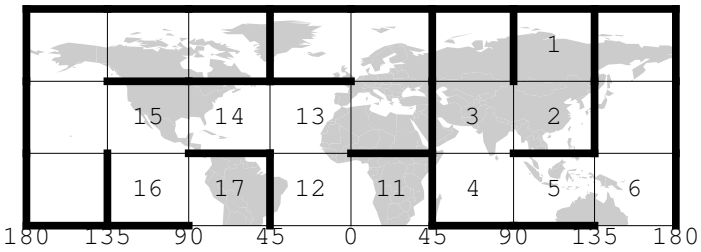
1.


90
135
18
17
45
16
11
14
15
12
13
180
0
1
2
3
6
7
10
5
4
8
135
9
45
90

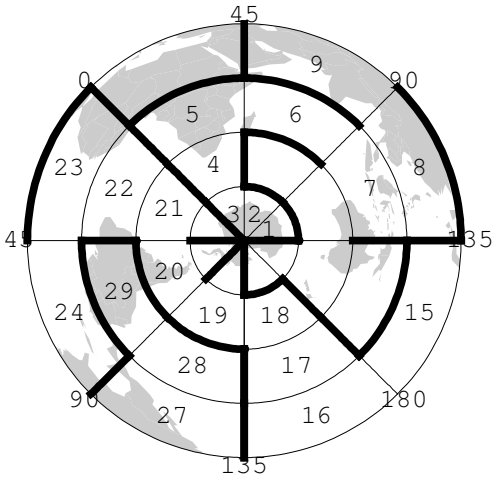

26
27
25
20
21
22
23
24
19
45
90
135
180
135
90
45
0
45

2.

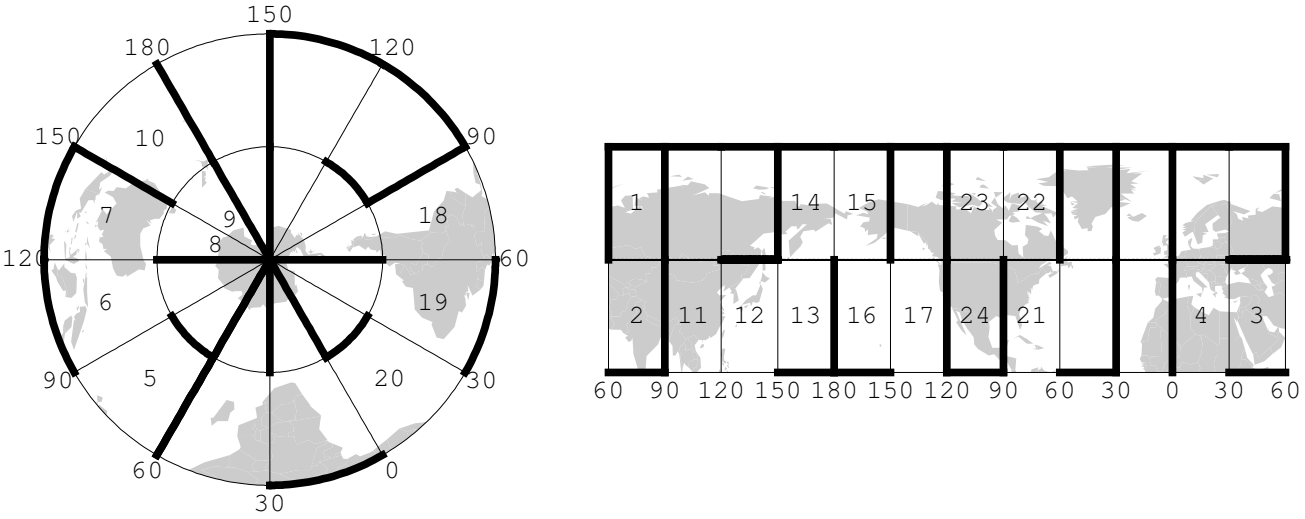

135
180
19
18
90
20
21
22
135
45
7
10
90
8
9
0
45


1
15
14
13
3
2
16
17
12
11
4
5
6
180
135
90
45
0
45
90
135
180

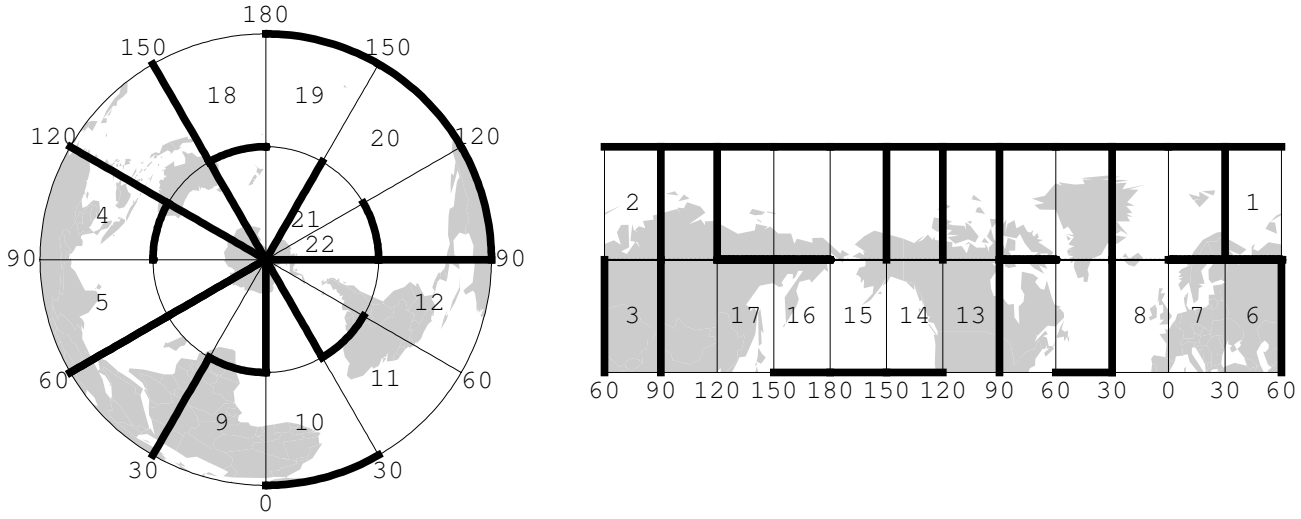
3.


45
0
90
135
180
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

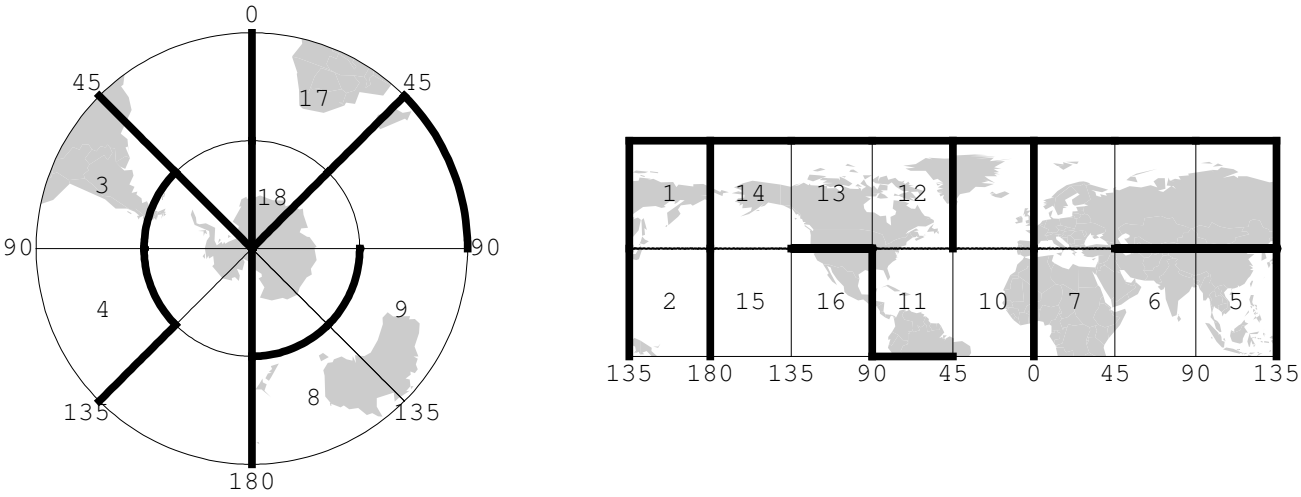
4.


150
180
120
150
10
90
7
9
18
8
120
60
6
19
90
5
20
30
60
0
30
1
14
15
23
22
2
11
12
13
16
17
24
21
4
3
60 90 120 150 180 150 120 90 60 30 0 30 60

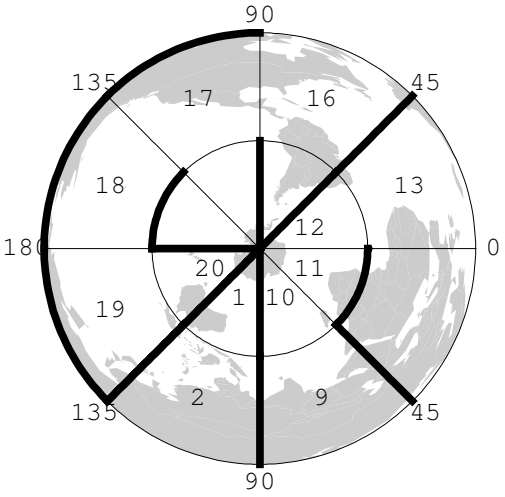
5.

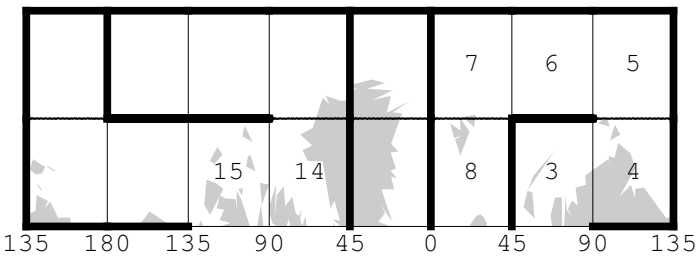

180
150
150
120
120
90
90
60
60
30
30
0
18
19
20
21
22
4
5
12
11
9
10
2
1
3
17
16
15
14
13
8
7
6
60 90 120 150 180 150 120 90 60 30 0 30 60

6.

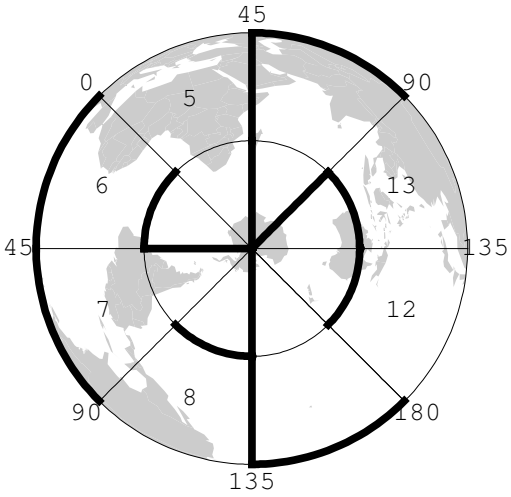

0
45
45
17
3
18
90
90
4
9
8
135
135
180
1
14
13
12
2
15
16
11
10
7
6
5
135
180
135
90
45
0
45
90
135

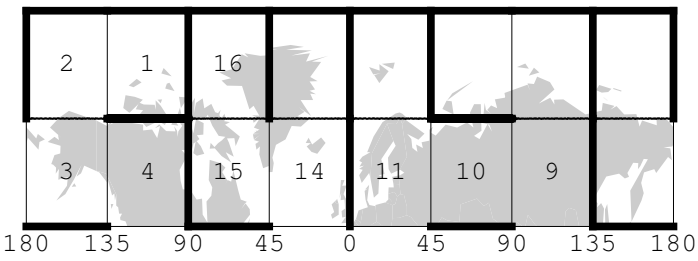
7.


90
135
45
17
16
18
13
12
180
0
20
11
1
10
19
2
9
135
45
90

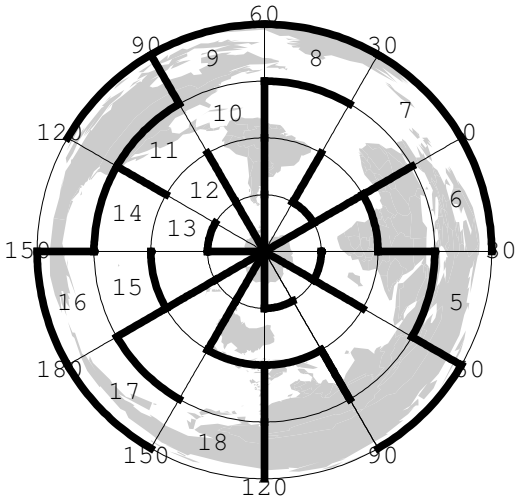

7
6
5
15
14
8
3
4
135
180
135
90
45
0
45
90
135

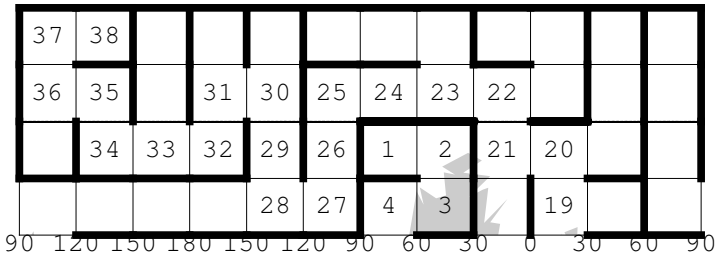
8.


45
0
90
5
6
13
45
135
7
12
8
90
180
135

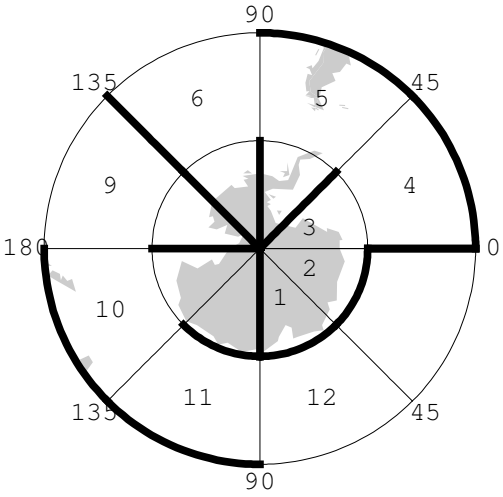

2
1
16
3
4
15
14
11
10
9
180
135
90
45
0
45
90
135
180

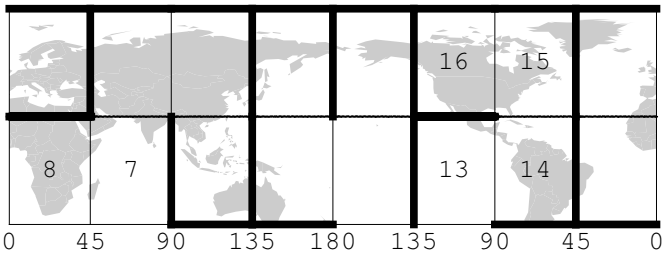
9.


60
90
30
120
0
150
30
180
150
90
120
8
7
6
5
9
10
11
12
13
14
15
16
17
18

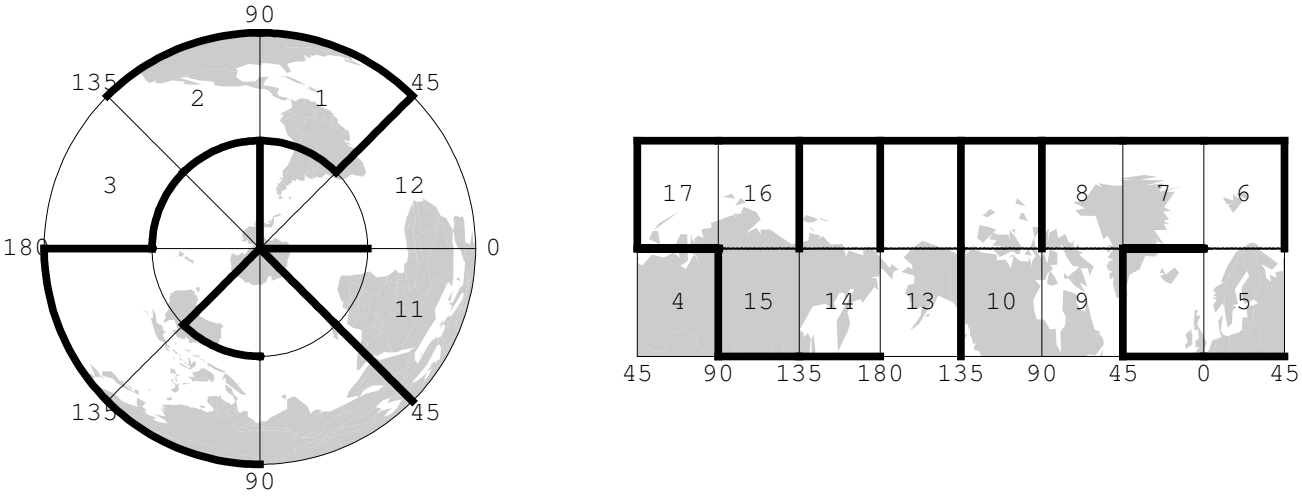

37 38
36 35 31 30 25 24 23 22
34 33 32 29 26 1 2 21 20
28 27 4 3 19
90 120 150 180 150 120 90 60 30 0 30 60 90

10.

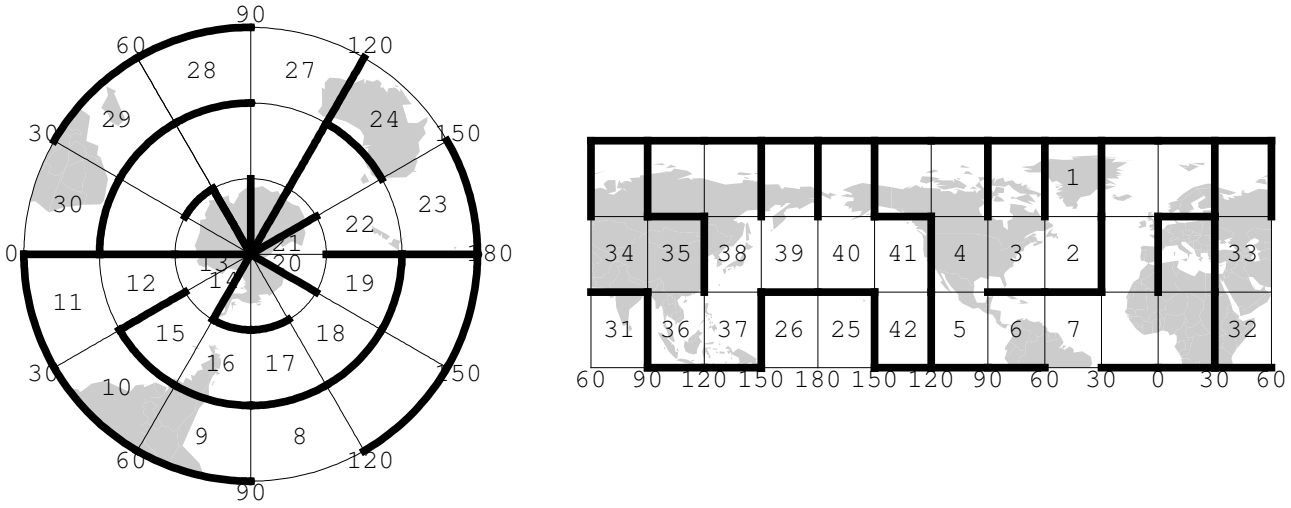

90
135
45
6
5
9
4
3
180
0
2
1
10
11
12
135
45
90


16
15
8
7
13
14
0
45
90
135
180
135
90
45
0

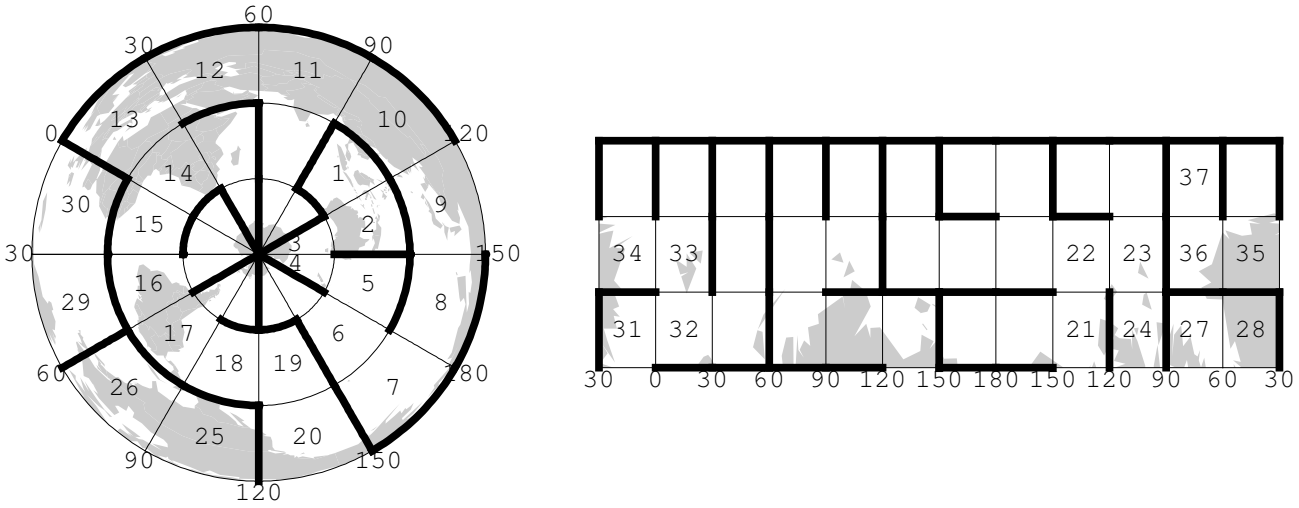
11.


90
135
45
2
1
3
12
180
0
11
135
45
90
17
16
8
7
6
4
15
14
13
10
9
5
45
90
135
180
135
90
45
0
45

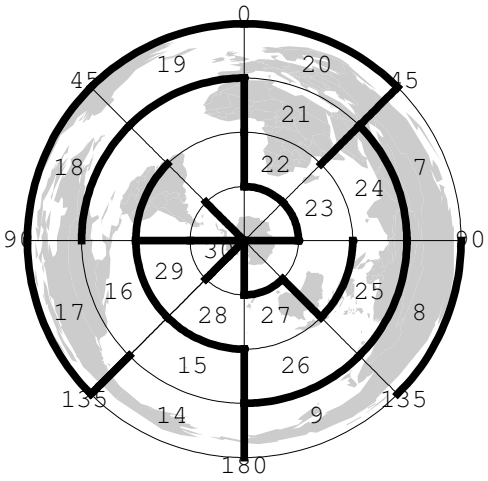
12.

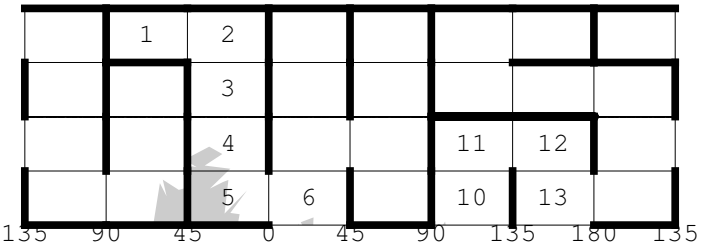

90
60
120
30
150
0
180
30
150
60
120
90
1
2
3
4
5
6
7
8
9
10
11
12
15
16
17
18
19
22
23
24
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
60 90 120 150 180 150 120 90 60 30 0 30 60

13.

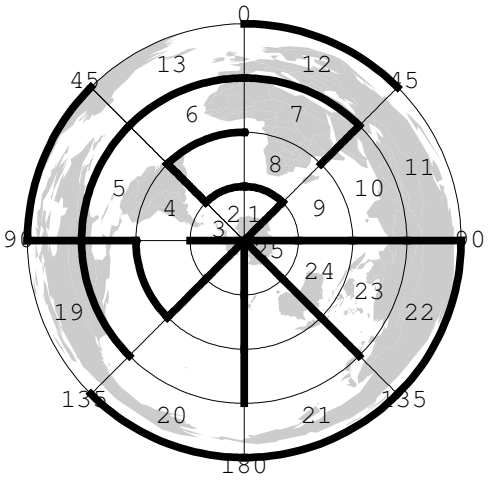

60
30
90
0
120
30
150
30
60
90
120
150
180
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
25
26
29
30
31
32
33
34
35
36
37
21
22
23
24
27
28
30 0 30 60 90 120 150 180 150 120 90 60 30

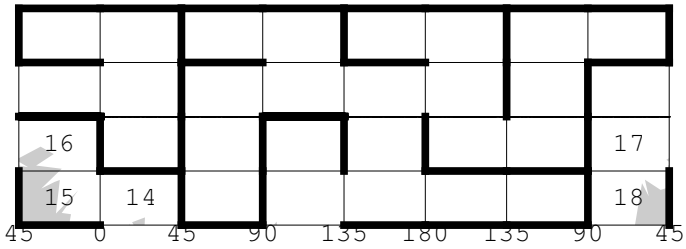
14.


0
45
45
90
90
135
135
180
19
20
21
22
23
24
7
18
30
29
16
17
28
27
25
8
15
26
14
9


1
2
3
4
5
6
10
11
12
13
135
90
45
0
45
90
135
180
135

15.


0
45
45
90
90
135
135
180
1
2
3
4
5
6
7
8
9
10
11
12
13
19
20
21
22
23
24
25


16
17
15
14
18
45
0
45
90
135
180
135
90
45