cube state	length of phase 1	length of phase 2	time (seconds)
1	10	10	1072
2	11	9	6785
3	10	10	137
4	11	9	6123
5	9	11	87
6	10	10	774
7	11	9	1489
8	10	9	1079
9	12	8	14096
10	10	10	329