

Maximum Lengths to Mate in the Chess Endgame King+Queen vs King+Rook on Boards of Size m x n

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Each line contains a board size $m \times n$ and for this board size the maximum length to mate for a chess position with king and queen versus king and rook, where the side with the queen is to move.

For each value of m (the larger side length) an arrow indicates the value of n where the longest distance to mate occurred. Interestingly, the arrow is not allowed in the line with $m=n$.

Open Question:

For n to infinity, will the maximum length to mate on $n \times n$ -board be larger than n^2 , and if so, by how much ?

Observe: So far, these data have not been verified by an independent group. The databases were computed with a parallel algorithm, and access collisions may have led to wrong values for some positions.

5x2	6	
5x3	15	
5x4	19	<---
5x5	17	
6x2	9	
6x3	11	
6x4	34	<---
6x5	24	

6x6 23
7x2 10
7x3 12
7x4 37 <---
7x5 28
7x6 27
7x7 29

8x2 14
8x3 13
8x4 26
8x5 37 <---
8x6 34
8x7 33
8x8 35

9x2 15
9x3 13
9x4 27
9x5 48 <---
9x6 42
9x7 41
9x8 42
9x9 44

10x2 17
10x3 15
10x4 30
10x5 62 <---
10x6 56
10x7 54
10x8 55
10x9 51
10x10 54

11x2 19
11x3 19
11x4 34
11x5 76 <---
11x6 70
11x7 65
11x8 67
11x9 62
11x10 63
11x11 69

12x2 21
12x3 20
12x4 36
12x5 92 <---
12x6 89
12x7 83

12x8 81
12x9 81
12x10 83
12x11 79
12x12 85

13x2 23
13x3 21
13x4 37
13x5 40
13x6 107
13x7 106
13x8 101
13x9 99
13x10 96
13x11 93
13x12 100
13x13 108 <---

14x2 25
14x3 22
14x4 39
14x5 41
14x6 46
14x7 56
14x8 150 <---
14x9 129
14x10 119
14x11 119
14x12 127
14x13 123
14x14 132

15x2 27
15x3 23
15x4 43
15x5 49
15x6 50
15x7 57
15x8 125
15x9 120
15x10 225 <---
15x11 170
15x12 167
15x13 174
15x14 185
15x15 205

16x2 29
16x3 24
16x4 45
16x5 53
16x6 54

16x7 68
16x8 109
16x9 72
16x10 172
16x11 199
16x12 214
16x13 233
16x14 270 <---

16x15 ???
16x16 ???