

# PROVING CORRECTNESS OF A KRK CHESS ENDGAME STRATEGY BY SAT-BASED CONSTRAINT SOLVING

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The article under the same title was published in:  
ICGA Journal, Volume 36, No. 2, 2013.  
The article is accompanied by:

- the C program (KRK.c) presented in the paper;
- the URSA specification and lemmas (KRK.urs) presented in the paper;

available online from: <http://argo.matf.bg.ac.rs/downloads/software/krk.zip>.

After the article was published, and during our formalization of the strategy within a proof assistant, we made a few minor changes in the URSA specification, that lead to somewhat changed numbers in the table from the article (the new numbers are given below). The lemmas are kept the same.

Lema	1	2	3	4	5	6	7	8	9
Number of variables	73627	227270	151228	293524	514701	73594	73166	77765	77765
Number of clauses	262063	808644	537368	1045159	1832567	262305	260601	275804	275813
Time (in seconds)	128	8852	42	11885	215	18	17	37	34

Table 1: The number of variables and clauses in SAT instances generated from conjectures of the lemmas and CPU time used for solving these instances (on a computer PC T5870 2.00GHz, 1.8 GB RAM)

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