The first section consisted of the well-studied Pigeon-Hole formulas because there is a known proof scheme that produces what are believed to be the shortest possible proofs (see "Theory" in the table), due to S. Cook in 1971, and rediscovered by A. Hakin about 1985, and again by A. Van Gelder about 2003. The formula for $P$ pigeons has $P(P - 1)$ variables and $P(P^2 - 2P + 3)/2$ clauses. The Theory derivation has $(P - 1)(P + 2)/2$ clauses.

Note that the $tts$ solver produces proofs that grow close to the optimum ratio.

The second section consisted of 17 benchmarks from the regular track, industrial category, of the competition.

Resources: 1 CPU hour at 6.2 GHz, 8 GB real memory, about 6 GB swap, and file size limit 36 GB (most cases) on a local disk.

Who Are the Winners?

It was a mixed bag. $tts$ was the clear winner on pigeon-hole formulas, but did very poorly on the RUP format. booleforce edged out zchaff on industrial formulas, but had a few programming problems, and did very poorly on pigeon-hole formulas. zchaff had the best balance between the two sections. picosat with the RUP format produced the most proofs, but many RUP proofs could not be verified within the allocated time and disk space.

Experiments, Analysis and Compilation of Results by Allen Van Gelder http://www.cse.uci.edu/~avg/AvgProofChecker with assistance from Daniel Le Berre