

## Satisfiability III (sat3)

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**Problem:** Is the following set of statements correct? “If Superman were able and willing to prevent evil, he would do so. If Superman were unable to prevent evil, he would be impotent and if he were unwilling to prevent evil, he would be malevolent. Superman does not prevent evil. If Superman exists, he is neither impotent nor malevolent. Therefore, Superman does not exist.” (see [1]).

### Questions

1. Verify that LPL’s translation is correct, by generating the CNF using the method given in model [sat1](#)<sup>1</sup>
2. Verify that the argument *cannot* be proven with the LP relaxation.

## References

- [1] D. Gries and F.B. Schneider. *A Logical Approach to Discrete Math*. Springer, p 37, 1994.
- [2] MatMod. Homepage for Learning Mathematical Modeling : <https://matmod.ch>.

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<sup>1</sup><https://lpl.matmod.ch/lpl/Solver.jsp?name=/sat1>