

# Automated Theorem Proving

## Exercises

### 1 Paramodulation

*Exercise 1.* Let

$$I : f(f(x, y), f(z, f(x, x))) = g(x) \vee p(f(x, x))$$
$$F : f(x', f(b, b)) = g(a)$$

find all the possible clauses which can be derived by applying paramodulation.

### 2 About previous sections

*Exercise 2.* Consider a  $3 \times 3$  board for the game Mines, with the following configuration.

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Use resolution in order to prove that such configuration is impossible.