## Herbrand's Theorem Exercises

## 1 Herbrand's Theorem

*Exercise 1.* Find an unsatisfiable set S of ground instances of clauses in  $C_i$ , for

1.  $C_1 = \{p(x, a, g(x, b)), \neg p(f(y), z, g(f(a), b))\}$ 2.  $C_2 = \{p(x), q(x, f(x)) \lor \neg p(x), \neg q(g(y), z)\}$ 

Try to find the shortest way, if any, to get the set of instances (i.e., the smallest semantic tree).