Tik-79.144 **Fall 1998**
Logic in Computer Science: Foundations
Exercise 9

1. What are the most general unifiers of the following sets of literals?

a) $\{P(x, g(y), f(a)), P(f(y), g(f(z)), z)\}$
b) $\{P(x, f(x), g(y)), P(a, f(g(a)), g(a)), P(y, f(y), g(a))\}$
c) $\{P(x, f(x, y)), P(y, f(y, a)), P(b, f(b, a))\}$
d) $\{P(f(a), y, z), P(y, f(a), b), P(x, y, f(z))\}$

2. We know that:

1) If a brick is on another brick, then it is not on the table
2) Every brick is either on the table or on another brick.
3) No brick is on a brick which is also on some other brick.

Use resolution to prove that if a brick is on another brick, the other brick is on the table.