Exercise 13
OTTER Representation and Proving

Represent the follow statements as OTTER formulas (Adapted from Lewis Carroll):

- The only animals in this house are cats
- Every animal is suitable for a pet, that loves to gaze at the moon
- When I detest an animal, I avoid it
- No animals are canivourous, unless they prowl at night
- No cat fails to kill mice
- No animals ever take to me, except what are in the house
- Kangaroos are not suitable for pets
- None but carnivora kill mice
- I detest animals that do not take to me
- Animals, that prowl at night, always love to gaze at the moon

Use OTTER to prove the statement:

I always avoid a kangaroo

Send only the complete working otter program as the answer.

Exercise 14
Concepts in Resolution

This assignment is basically to do examples, by hand, dealing with the different concepts of resolution:

- Take the following two clauses from above:
  - The only animals in this house are cats
  - No animals ever take to me, except what are in the house

  and do the following:
  1. Convert both formulas to clause form
  2. Do unification and binary resolution by hand giving the result
- Give one example for each of the following (use the clauses above if possible)
  1. literal
  2. Positive Clause
  3. Negative Clause
  4. Mixed Clause
  5. UR-Resolution (different from binary resolution)
  6. Hyperresolution (different from UR and binary)
  7. Paramodulation (not just simple equality)
  8. Subsumption

(send exercise 13 and 14 in two mails).