

First-Order Resolution

Example from the book (Pg. 298-299)

Everyone who loves all animals is loved by somebody, but anybody who kills an animal is loved by nobody. Jack loves all animals. Either Jack or Curiosity killed the cat, who is named Tuna. Did Curiosity kill the cat?

I. Translate each sentence into FOL and convert to CNF

1. Everyone who loves all animals is loved by somebody.
2. Anybody who kills an animal is loved by nobody.
3. Jack loves all animals.
4. Either Jack or Curiosity killed the cat, who is named Tuna.
5. Did Curiosity kill the cat?

II. Proof by contradiction through resolution

1. Negate the query.
2. Begin resolution – can we derive {}?

III. Look at the resulting proof