Question 3:

all x (humningbird(x) -> bird(x)).

all x (humningbird(x) -> richcolor(x)).

all x (largebird(x) -> -livehoney(x)).

all x (-livehoney(x) -> -richcolor(x)).

all x (humningbird(x) -> -largebird(x)).

============================== prooftrans ============================

Prover9 (32) version Dec-2007, Dec 2007.

Process 29872 was started by ngocthinhnguyen on NgocThinhNguyen.local,

Sat Nov  4 21:22:25 2017

The command was "/Users/ngocthinhnguyen/Prover9.app/Contents/Resources/bin-mac-intel/prover9".

============================== end of head ===========================

============================== end of input ==========================

============================== PROOF =================================

% -------- Comments from original proof --------

% Proof 1 at 0.00 (+ 0.00) seconds.

% Length of proof is 13.

% Level of proof is 4.

% Maximum clause weight is 0.

% Given clauses 0.

2 (all x (humningbird(x) -> richcolor(x))) # label(non\_clause).  [assumption].

3 (all x (largebird(x) -> -livehoney(x))) # label(non\_clause).  [assumption].

4 (all x (-livehoney(x) -> -richcolor(x))) # label(non\_clause).  [assumption].

5 (all x (humningbird(x) -> -largebird(x))) # label(non\_clause) # label(goal).  [goal].

6 humningbird(c1).  [deny(5)].

8 -humningbird(x) | richcolor(x).  [clausify(2)].

9 largebird(c1).  [deny(5)].

10 -largebird(x) | -livehoney(x).  [clausify(3)].

11 -livehoney(c1).  [resolve(9,a,10,a)].

12 livehoney(x) | -richcolor(x).  [clausify(4)].

13 -richcolor(c1).  [resolve(11,a,12,a)].

14 richcolor(c1).  [resolve(6,a,8,a)].

15 $F.  [resolve(13,a,14,a)].

============================== end of proof ==========================

Question 4:

all x (gardener(my,x) -> wellListenMillitary(x)).

all x (rememberBattle(x) -> old(x)).

all x (wellListenMillitary(x) -> rememberBattle(x)).

Conclusion

all x (gardener(my,x) -> old(x)).

============================== prooftrans ============================

Prover9 (32) version Dec-2007, Dec 2007.

Process 30169 was started by ngocthinhnguyen on NgocThinhNguyen.local,

Sat Nov  4 22:56:36 2017

The command was "/Users/ngocthinhnguyen/Prover9.app/Contents/Resources/bin-mac-intel/prover9".

============================== end of head ===========================

============================== end of input ==========================

============================== PROOF =================================

% -------- Comments from original proof --------

% Proof 1 at 0.00 (+ 0.00) seconds.

% Length of proof is 13.

% Level of proof is 4.

% Maximum clause weight is 0.

% Given clauses 0.

1 (all x (gardener(my,x) -> wellListenMillitary(x))) # label(non\_clause).  [assumption].

2 (all x (rememberBattle(x) -> old(x))) # label(non\_clause).  [assumption].

3 (all x (wellListenMillitary(x) -> rememberBattle(x))) # label(non\_clause).  [assumption].

4 (all x (gardener(my,x) -> old(x))) # label(non\_clause) # label(goal).  [goal].

5 gardener(my,c1).  [deny(4)].

6 -gardener(my,x) | wellListenMillitary(x).  [clausify(1)].

7 -wellListenMillitary(x) | rememberBattle(x).  [clausify(3)].

8 -rememberBattle(x) | old(x).  [clausify(2)].

9 -wellListenMillitary(x) | old(x).  [resolve(7,b,8,a)].

10 -old(c1).  [deny(4)].

11 -wellListenMillitary(c1).  [resolve(9,b,10,a)].

12 wellListenMillitary(c1).  [resolve(5,a,6,a)].

13 $F.  [resolve(11,a,12,a)].