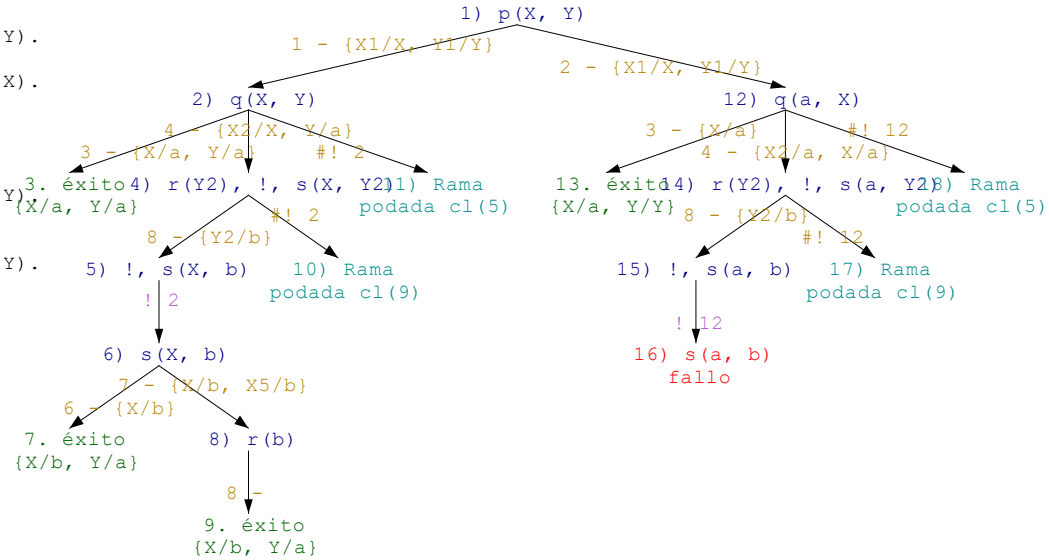```
1 p(X, Y):-
      q(X, Y).
2 p(X, Y):-
      q(a, X).
3 q(a, a).
4 q(X, a):-
      r(Y),
      !,
      s(X, Y).
5 q(X, Y):-
      r(X),
      p(X, Y).
6 s(b, b).
7 s(b, X):-
      r(X).
8 r(b).
9 r(a).
```