Aufgabe 7-1  Forward- and Backward-Reasoning
Discuss the difference between forward and backward reasoning by considering the phenomenon pressure to buy (deutsch: Kaufzwang).

Aufgabe 7-2  Closed-World Assumption
Discuss possibilities to introduce the Closed-World Assumption into the Tableau Calculus for ALC. What would be the consequences.

Aufgabe 7-3  Monotonic Logic
Does the closed-world assumption cause a monotonic or a non-monotonic logic?

Aufgabe 7-4  Datalog, Range-Restriction
What would change in the implementation of a Datalog system if the requirement that all variables in the head of a rule also occur in the body of the rule (Range Restriction)?

Aufgabe 7-5  Graph-Coloring
Try to code the graph-coloring problem (with 3 colors) in Datalog, and give two reasons why this must fail.

Aufgabe 7-6  Contradictions in Datalog
Is it possible to find contradictions in Datalog, and if not, what would have to be changed to make this possible. What would be the consequences?

Aufgabe 7-7  OPS 5
Explain what the following OPS-5 program does. (http://www.99-bottles-of-beer.net/language.ops5-2208.html)

(literalise Count bottles)
(literalise SecondLine)

(startup
  (make Count ~bottles 99)
)

(p moreBeer
Aufgabe 7-8  Prolog

What happens when the following Prolog program

\[
p(Z,f(Z)).
q(X) :- p(X,X).
\]

is called with a query \( q(Y). \)? Explain the result.