

CSE 341 — Prolog Difference List Discussion Questions — Answers

These questions use the Prolog rules in the difference list examples.

1. Which of the following lists represent valid difference lists? For valid difference lists, what list do they represent?

```
[1,2|T]\T      -- valid, represented [1,2]
[1,2,3]\[]     -- valid, represents [1,2,3]
[1,2,3]\[1,2]  -- not valid
[1,2,3|T]\[3|T] -- valid, represents [1,2]
[1,2,3]\[1,2,3] -- valid, represents []
```

2. Draw the derivation tree for the following goals:

```
?- reverse([1],R).
?- quicksort([2,1,3],S).
```

Sorry! Haven't gotten these drawn and scanned (or tried to typeset them). Try running them with the trace facility to see how Prolog evaluates them.