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.