

Q U I C K S O R T

1. quicksort([], []).
2. quicksort([X], [X]).
3. quicksort([X, Y | Z], W) :-
 partition([X, Y | Z], [U, V]),
 quicksort(U, Q), quicksort(V, R),
 append(Q, R, W).
4. partition([X, Z], [[X], [Z]]) :- (X < Z).
5. partition([X, Z], [[Z], [X]]) :- (Z =< X).
6. partition([X, Y | Rest], [[Y | U], V]) :-
 (Y < X),
 partition([X | Rest], [U, V]).
7. partition([X, Y | Rest], [U, [Y | V]]) :-
 (X =< Y),
 partition([X | Rest], [U, V]).
8. append([], X, X).
9. append([U | X], V, [U | W]) :-
 append(X, V, W).