

Notes 2.17-2.27

Pair

- Constant cdrs and the last one is always an empty list
- If the last one is not an empty list → cons, not pair

Cons

- Always returns one pair

List

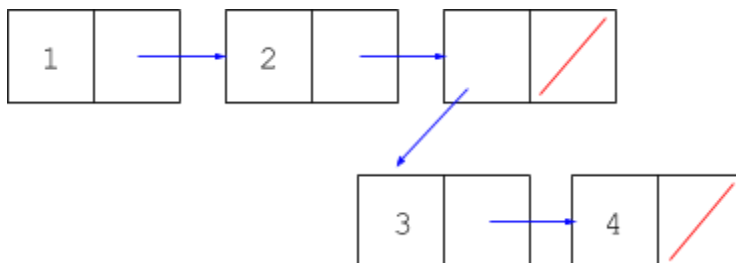
- Returns the same number of pairs as the amount of inputs given
- E.g. (list 1 2) → 2 pairs
- Pairs and empty lists are examples of lists
- Always ends with an empty list

Empty list

- Zero pairs

Example (box-pointer diagram)

- '(1 2 (3 4)) → 5 pairs



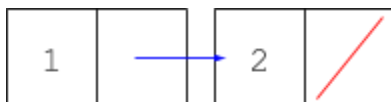
- '() → 0 pairs



- Not a list: (cons 1 2)



- List: (cons 1 (cons 2 '()))



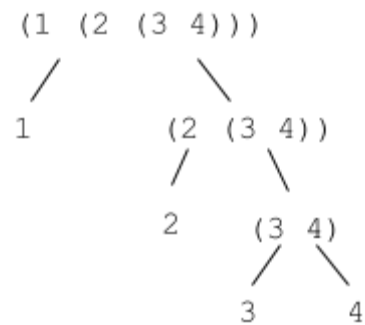
Note: ends in a cons of empty list while the previous one ends in a cons of two numbers

Map

- Applies a function to every argument in a list

Tree Diagram

- Each argument/sublist is a new line



Reverse

- Know how to write reverse & deep-reverse
- Important part: `(append (reverse (cdr lyst)) (list (reverse (car lyst))))`