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Problem Bank Style Rules Design Recipes Language Glossarv Discussion Progress Course > 4a: Self-Reference > Designing with Lists > Question 4-6 **₫ ₫ B** 📀 Ø, Previous **Question 4-6** ☐ Bookmark this page Question 4 1/1 point (graded) Choose the part of the template that results from each highlighted part of the Type Comment. ;; ListOfNumber is one of: ;; - empty
;; (cons Number ListOfNumber ;; interp. a list of numbers (define (fn-for-lon lon) (cond [(emp\_y? lon)(...)] [else (... (first lon) (fn-for-lon (rest lon)))])) **Explanation** ListofNumber has two cases, so we need a cond expression. empty is the first case, and it is atomic distinct, so the answer clause is (...). 0 Show Answer 6 Answers are displayed within the problem Question 5 1/1 point (graded) ;; ListOfNumber is one of: ;; - empty ;; (cons Number ListOfNumber ;; interp. a list of numbers (define (fn-for-lon lon) (cond [(empty? lon)(...)] [else (... (fi●t lon) (fn-for-lon (rest lon)))])) **Explanation** (cons Number ListOfNumber) is compound, so we separate it into two parts, the first being (first lon). 0 Show Answers are displayed within the problem Question 6 1/1 point (graded) ;; ListOfNumber is one of: ;; - empty
;; (cons Number ListOfNumber
;; interp. a list of numbers

(define (fn-for-lon lon) (cond [(empty? lon)(...)] [else (... (first lon) (fn-for-lon rest lon)))))

## Explanation

The second part of the compound is (rest lon) which is ListOfNumber. This is a self-reference in the type comment, so (rest lon) is wrapped in a call to fn-for-lon to form a natural recursion.



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