;;Homework 1.29 and 1.30

(define spilt-head

(lambda (lst n1 n2)

(if (= n2 n1)

'()

(cons (car lst) (spilt-head (cdr lst) n1 (- n2 1))))))

(define spilt-tail

(lambda (lst n n1 n2)

(if (< n n1)

(spilt-tail (cdr lst) (+ n 1) n1 n2)

(if (< n n2)

(cons (car lst) (spilt-tail (cdr lst) (+ n 1) n1 n2))

'()))))

(define msort

(lambda (pred lst)

(if (> (length lst) 1)

(merge (msort pred (spilt-head lst 0 (quotient (length lst) 2)))

(msort pred (spilt-tail lst 0 (quotient (length lst) 2) (length lst))) pred)

lst)))