

A Scheme Listing in L^AT_EX

```
;; The Y combinator
(define Y
  (lambda (f)
    ((lambda (x) (f (lambda arg (apply (x x) arg))))
     (lambda (x) (f (lambda arg (apply (x x) arg)))))))

;; Factorial function using the Y combinator
(define fact
  (Y (lambda (f)
      (lambda (n)
        (if (<= n 0)
            1
            (* n (f (- n 1))))))))
```