Unrestricted Lambda
The procedure (lambda (x y z) ....) takes 3 arguments. (lambda (x y z w) ... ) takes 4. Sometimes we want to write a function that takes an indeterminate number of arguments. For example, we might want to have an average procedure that averages its arguments:

- (avg 4) returns 4
- (avg 3 4) returns 3.5
- (avg 3 4 5) returns 4,
and so forth.
If we write a lambda expression with one parameter, without parentheses around this parameter, as in

    (lambda args …)

then when this procedure is call all of the actual arguments are collected in a list which is bound to the parameter args.

Here is our function avg:

    (define avg
        (lambda args
            (let ([sum (apply + args)]
                [n (length args)])
                (/ sum n))))
You may have noticed that +, <, max, and other operators are defined as procedures in Scheme, but and is a form (a kind of expression), not a procedure. This means that we can't apply and in a recursion. Here is a procedure-version of and:

```
(define and-proc
  (lambda args
    (cond
      [(null? args) #t]
      [(car args) (apply and-proc (cdr args))]
      [else #f])))
```