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;;;; MIT 6.001 Fall/1998
;;;; Problem Set 0
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;;; Expressions to evaluate
-37
; -37

(* 8 9)
; 72

(> 10 9.7)
; #t

(- (if (> 3 4)
      7
      10)
   (/ 6 10))
; 9.4

(* (- 25 10)
   (+ 6 3))
; 135

+
; compound procedure

(define double (lambda (x) (* 2 x)))
; undefined

double
; compound procedure

(define c 4)
; undefined

c
; 4

(double c)
; 8

c
; 4

(double (double (+ c 5)))
; 36

(define times-2 double)
; undefined

(times-2 c)
; 8

(define d c)
; undefined

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(= c d)
; #t

(cond ((>= c 2) d)
      ((= c (- d 5)) (+ c d))
      (else (abs (- c d))))
; 4

(define applyto3 (lambda (x) (x 3)))
; undefined. Just created procedure that apply it's argument to the
; the expression 3.

(applyto3 double)
; 6. The applyto3 procedure takes its argument, another procedure
; (double) and apply this procedure to the expression 3 (wich is 3)

(applyto3 (lambda (z) (* z z)))
; 9. The applyto3 procedure take its argument (the lambda expressions
; that is creating an unmaed procedure that multiply z by z) and apply
; to the expression 3).

;;; Questions
; Q1. According to the Don't Panic manual, what is the stepper and how
; do you invoke it?
; R1. The "stepper" permits step through evaluation of the expression,
; element by element and see the evaluation of each
; subexpression. Stepper is activated with M-s, on Edwin.

; Q2. According to the Guide to MIT Scheme, which of the words, in the
; scheme expressions you just evaluated above, are ``special
; forms''?
; R2. define, lambda, if, cond, else

; Q3. After referring to the course policy on collaboration, complete
; the following two sentences:
;
; Q3a. ``If you work with other students, ...''
; R3a. must identify with whom you worked. We expect, however,
; that you are involved in all aspects of the project. you
; write and comment your own set of code, and that you write
; up your results separately.
;
; Q3b. ``On your homework paper, you should write ...''
; R3b. You write and comment your own set of code, and that you
; write up your results separately. When you hand in material
; with your name on it, we assume that you are certifying
; that this is your work and that you were involved in all
; aspects of it. Do not just turn in a copy of a single file;
; write your own version.

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