SECOND QUIZ

You have 15 minutes from the start of class to complete this quiz. Read the problems with care; work with deliberate speed. Don't give us more than we ask for. The usual instructions apply. Good luck!

Problem 1 (5 points)

Evaluate each of the following expression(s). (That is, what does DrRacket display in the interactions window when you enter the expression(s) in the definitions window and click Run?)

(a)
```
; double:  number  ->  number
; Return the input value, times 2
(define double
  (lambda (n)
    (* 2 n)))

; decimate:  number  ->  number
; Return 1/10 of the input value
(define decimate
  (lambda (n)
    (/ n 10)))

(double 15)


(decimate 500)


(+ (decimate (double 50)) (double (decimate 100)))
```

(b)
```
(-
  (* 5 (+ 1 2 3))
  (/ (/ 100 4) (+ 2 3)))
```

Problem 2 (3 points)

Each of the following statements relates to the video lecture on laptops in the classroom, but each one is inaccurate, misguided, or wrongheaded in some way. Please say in a few words what's wrong with each statement, according to the video.

(a) When things get boring or confusing in class, that's a good time to use your laptop to check your e-mail.

(b) It's a good strategy to copy down, word for word, as much of what the instructor says as possible.

(c) People work just as effectively when juggling multiple tasks (multi-tasking) as they do when they focus on just one task.

Problem 3 (12 points)

Students in Molecular Gastronomy 191 complete a term project, a midterm exam, and a final. A student receives a score of 0 to 100 on each of these items. The project is worth 45% of the course grade, the midterm is worth 20%, and the final is worth 35%.

(a) (3 points) Write a contract and a brief purpose statement for the function `MG-grade` that takes three inputs (representing one student's scores on the project, the midterm, and the final, in that order) and returns the student's overall weighted score in the class (a number between 0 and 100, computed according to the weights given above).

(b) (2 points) Write two examples/tests of `MG-grade` in the form of `check-expect` expressions.

(c) (7 points) Write the function header and function body for `MG-grade` (i.e., the entire function definition). Use the following defined identifiers in your code:

```
(define PROJECT-WEIGHT 0.45)
(define MIDTERM-WEIGHT 0.20)
(define FINAL-WEIGHT   0.35)
```