

FIRST QUIZ

Please read these instructions carefully; they will apply for all our quizzes, but we won't repeat them every time. You have 10 minutes from the start of class to complete this quiz.

Please read all the problems closely. If you have any questions on what a problem means, don't hesitate to ask us. Don't get bogged down on any one problem; if you have trouble on a problem, go on to the next one. Unless a problem specifically asks you to consider errors, you should assume that each problem is correct and solvable, and ask us if you believe otherwise.

Please write your answers clearly—we can't give you credit if we can't decipher what you've written. We'll give partial credit for partially correct answers, so writing something is better than writing nothing. But no question requires an answer longer than two sentences, so don't just write everything you know and hope that the right answer will be included somewhere; we will deduct points for needlessly long answers. Good luck!

Problem 1 (4 points)

Each of the following statements claims to be a policy, procedure, or good advice for Informatics 41, but each is inaccurate, misguided, or wrongheaded in some way. Please change each statement (as little as possible) to make it an accurate statement on the same topic.

- (a) The best e-mail address for course-related questions is `david-alex-tosin-help-me@uci.edu`.
- (b) In pair programming, it's best to work with the most experienced classmate available; he or she will handle most of the work.
- (c) For some lab assignments, students may complete an on-line evaluation of his or her partner using the Survey tool at `eee.uci.edu`.
- (d) It's not important to come to every class meeting since all the important material is in the textbook.

Problem 2 (4 points)

Evaluate each of the following expressions. That is, what does DrScheme display in the interactions window when you enter the expression or click Run?

(a) `(+ (* 4 10) (- 7 1))`

(b)

```
(define cut-down
  (lambda (num)
    (/ num 10)))
(cut-down 750)
```

(c)

```
(define bump-up
  (lambda (a b)
    (* a (+ b 1))))
(bump-up 5 3)
```

Problem 3 (12 points)

Write the function `total-cash` that might be used in a cash-counting machine. The function takes four numbers as inputs—how many \$1 bills, \$5 bills, \$10 bills, and \$20 bills—and returns the total amount of cash those bills represent.

Write a contract, a brief purpose statement, the Scheme function definition, and two tests in the form of boolean expressions that should return true if the function works correctly. (It will help you to write the examples before you define the function; you just aren't required to write the examples as well as the tests on this quiz.)