CS 61A          Structure and Interpretation of Computer Programs
Summer 2016               QUIZ 9

INSTRUCTIONS

• You have 25 minutes to complete this quiz.
• The exam is closed book, closed notes, closed computer, closed calculator.
• Mark your answers on the quiz itself. We will not grade answers written on scratch paper.

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<td>First name</td>
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<td>Student ID number</td>
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<td>Instructional account (cs61a-_)</td>
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<td>BearFacts email (@berkeley.edu)</td>
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All the work on this exam is my own. (please sign)
1. (5 points) Remove All These Quizzes!
Write facts for remove-all, a relation between a value elem and two lists. This relation is only satisfied if the second list is the same as the first list, except with all instances of elem removed. The equal fact from lecture has been defined for you. You will very likely find this to be useful.
You may only use the lines provided. You may not need to fill all the lines.
(fact (equal ?x ?x))

(fact (remove-all ?elem __________ __________))

(fact (remove-all ?elem ____________________ ____________________ )
___________________________________________________________ )

(fact (remove-all ?elem ____________________ ____________________ )
___________________________________________________________ )

logic> (query (remove-all 1 (1 2 3 1 2 3 1 2 3) ?what))
Success!
what: (2 3 2 3 2 3)

logic> (query (remove-all 2 (1 2 2 3 1 2 2 2) ?what))
Success!
what: (1 3 1)

logic> (query (remove-all 4 (1 2 3 1 2 3 1 2 3) ?what))
Success!
what: (1 2 3 1 2 3 1 2 3)