

CSE 341, Pattern Matching and Datatypes
April 9, 2014

Programmer 1 : _____

Programmer 2 : _____

Programmer 3 : _____

Programmer 4 : _____

(A) With your group, write a function `str_of_exp : exp -> string` which produces a string representation of the given `exp`. *Bonus:* Only include the parentheses that are strictly necessary.

(B) With your group, write a function `eval' : (env * exp') -> int` that evaluates an extended expression in the given environment.

(C) With your group, write a function `compile` : `(env * exp') -> exp` that “compiles” an extended expression in the given environment to a basic expression.

(D) How would you prove the following?

$$\forall e. \forall g. \text{eval}'(g, e) = \text{eval}(\text{compile}(g, e))$$