# CSE 341 — Racket Discussion Questions Part 4 — Sample Solution

These questions deal with the `deriv` program.

What do each of the following expressions evaluate to?

1. `(basic-deriv '(+ x x) 'x)  =>  '(+ 1 1)`

2. `(deriv '(+ x x) 'x)  =>  2`

3. `(basic-deriv '(* 2 x) 'x)  =>  '(+ (* 2 1) (* 0 x))`

4. `(deriv '(* 2 x) 'x)  =>  2`

5. `(simplify '(+ 3 (+ 5 x)))  =>  '(+ 3 (+ 5 x))`

6. `(simplify '(+ (+ 3  5) x))  =>  '(+ 8 x)`