DrRacket Tips and Traps

Common errors

- **Too many parentheses** - Since an open parenthesis, ", indicates the beginning of a function, too many parenthesis will cause DrRacket to try to evaluate the result of the inner parenthesis as if it were a function, causing the error message: illegal application: first term in application must be a function name.

- **Too few parenthesis** - Such as leaving off the correct number of parenthesis at the end of your function definition. The parenthesis-matching capabilities of DrRacket are designed to minimize this error, so pay attention to the highlighting that takes place as you type in parenthesis. The error message generated is: syntax error: missing close paren or syntax error: too many close parens.

- **Misspellings** - Typographical errors will give a reference to undefined identifier: [xxxx] error.

- **Improper define syntax** - An incorrect syntax in a define statement may lead to a define: malformed definition error.

Error Message Interpretations

- **illegal application: first term in application must be a function name** - The first argument after the parenthesis must be a function. This error is generated by `((+ 3 4))`, where there is an extra set of parentheses.

- **syntax error: missing close paren** - The closing parenthesis is missing. The mis-matched opening parenthesis is highlighted by DrRacket. This error is generated by `(+ 5 (* 3 4))`.

- **syntax error: too many close parens** - The opening parenthesis is missing. The mis-matched closing parenthesis is highlighted by DrRacket. This error is generated by `+ 5 (* 3 4))`.

- **illegal application: first term in application is a function-bound identifier** - This error occurs in the "Beginning Student" level because function input parameters that are functions is not allowed. For example, it is generated by `(define (fn x y) (x y))`. Note that x needs to be a function.

- **reference to undefined identifier: [xxxx]** - This means that [xxxx] was misspelled. The misspelled word is highlighted by DrRacket. For example, the error is generated by `(* 4 5)` where *4 is "misspelled" due to a missing space.

- **define: malformed definition** - Incorrect syntax used in a define statement. For instance, `(define fn(x) (* x 5))` will generate the error. It should be `(define (fn x) (* x 5))`.

What does it mean when DrRacket says...?

- **#i[number]** - the number is an inexact value. That is, math errors may result from it because an approximation to the correct value has been used. For example, `pi` prints out as `#i3.141592653589793`.  
