DrRacket Tips and Traps

Common errors

- **Too many parentheses** - Since an open paranthesis, "(", indicates the beginning of a function, too many paranthesis will cause DrRacket to try to evaluate the result of the inner paranthesis 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 paranthesis 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 paranthesis is missing. The mis-matched opening paranthesis is highlighted by DrRacket. This error is generated by `(+ 5 (* 3 4)`.
- **`syntax error: too many close parens`** - The opening paranthesis is missing. The mis-matched closing paranthesis 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))` because `x` needs to be a function.
- **`reference to undefined identifier:[xxxx]`** - This means that `xxxx` was misspelled. The misspelled word is highlighted by DrRacket. Note that this may mean that there is a space missing between two words. 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`.