

# Intro

Author: Matt Broadway

Date: 27/10/15

Disclaimer: This is not guaranteed to be correct (but I think it is). You decide whether to believe me :)

## Currying

[See this explanation of currying](#)

### One of many effects this has

when writing a type signature in OCaml,  $\rightarrow$  is *right associative*. This means that these two type signatures are the same:

```
val f1 : 'a -> 'b -> 'c
val f2 : 'a -> ('b -> 'c)
```

This has the effect of being able to write the same function multiple ways:

f1 and f2 are equivalent. The difference between them is how they are conceptually treating the type signature.

```
val f1 : 'a -> 'b -> 'c

let f1 x y = ("do something to get a 'c");;
```

f1 treats the type signature the ‘normal’ way, that is: “f1 is a function that takes 2 arguments of type 'a and 'b and gives a type 'c”

```
val f2 : 'a -> ('b -> 'c)

let f2 x =
  let returnedFunction y = ("do something to get a 'c")
  in
    returnedFunction;;
```

f2 treats the type signature as meaning: “f2 is a function that takes a single argument of type 'a and gives a function. That function has type 'b -> 'c”

Because of currying, these two interpretations are both valid, can be called in the same way and produce the same result.