HW 4 **Prof. Caldwell**
Due: 13 September 2011 **COSC 3015**

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In class we discussed the following code.

addp (x,y) = x + y
addc x y = x + y
curry f x y = f(x,y)
uncurry f (x,y) = f x y
(f . g) x = f (g x)
id x = x

Recall the extensionality rule for proving functions $f, g : A \to B$ are equal.

$$f = g \stackrel{\text{def}}{=} \forall x : A.\ fx = gx$$

Following the proofs given in class, prove the following using extensionality.

i.) *uncurry . curry = id*
ii.) *(f . id) = f*
iii.) *(id . f) = f*