Exercise 7: Parameters and Prolog

# Exercise 7.1: Parameters

fun anotherFunction x = (print "anotherFunction called\n"; print x);

fun printAndReturnTwo () = (print "printAndReturnTwo called\n"; 2);

anotherFunction (printAndReturnTwo ());

> val anotherFunction = fn: ∀ 'a . 'a → unit;

> val printAndReturnTwo = fn: unit → int;

> val it = (): unit;

Printed: printAndReturnTwo called

Printed: anotherFunction called

Printed: 2

Based on the output, printAndReturnTwo was called and evaluated before anotherFunction and the program did not error. Which means the parameter is evaluated before the function which is pass-by-value.

# Exercise 7.2: Prolog

Define the isMember predicate so that isMember(X, Y) states that element X is a member of set Y. Do not use the predefined list predicates.

isMember(X, List) :- List = [Head|Tail], (X = Head; isMember(X, Tail)).