**Scheme Assignment I**

For this assignment you will be defining 2 functions and a program that work on “8 bit” binary numbers input as lists of 1s and 0s. You may not use iterative loops (only recursion!). Other than function arguments/parameters, you may not use variables. You can write additional helper functions if desired.

**Function 1**

Write and test a function that counts the number of 0s in the binary number. This function takes one parameter – the binary number.

**Function 2**

Write and test a function that divides a binary number (taken as a parameter) by 2 by implementing the “shift right” operation. (left most bit becomes 0, right most bit drops off).

**Program**

Write and test a program that displays a binary number divided by 2 and gives number of zeros and the number of ones in the original binary number. Please label your output.

Turn in a copy of your code to canvas.

Sample run

> (binaryProg '(1 0 1 1 1 1 1 1))

The number divided by 2 is (0 1 0 1 1 1 1 1)

There were 1 zeros

There were 7 ones

Interpreter:

<https://repl.it/languages/scheme>