COMP.2030 LAB 7 11/1/23

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Suppose are representing real numbers by the IEEE floating format with 5 exponent bits and 8 fraction bits (ignore the sign bit).
   1. What is the floating-point representation of the decimal number 7 in this format?

Exponent\_\_\_\_10001\_\_\_\_ Fraction\_\_\_11001001\_\_\_\_\_

* 1. What is the floating-point representation of the binary number 1.0011x2-2 in this format?

Exponent\_\_\_\_01101\_\_\_\_ Fraction\_\_\_00110000\_\_\_\_\_

* 1. What is the floating-point representation of the binary number 1.0011x2-13 in this format?

Exponent\_\_\_\_00010\_\_\_\_ Fraction\_\_\_00110000\_\_\_\_\_

1. Convert the DECIMAL value 11.1 into the IEEE floating format with a sign bit, a 5-bit exponent field, and a 10-bit fraction. Write your final 16-bit answer in Hexadecimal.

0x498D or 0x498C (without rounding)

1. 9

0x48AB or 0x48AA (without rounding)