**Sheet 1**
**Floating Point**

# 1 Question 1

What's the smallest and biggest normalized numbers in single and double precision IEEE floating point?

# 2 Question 2

Perform the following calculation in 8-bit 2's complement. First convert the numbers from decimal to binary representation, and then perform the computation. Report your answer in both binary 8-bit 2's complement and decimal representations.

(Hint: doing the addition in decimal will NOT work correctly.)

(-32) - (98)

# 3 Question 3

Give float value of 124.625 (decimal) in IEEE 754 single precision format **binary**.

# 4 Question 4

Consider the following values, using the IEEE 754 single precision floating-point format. What is the equivalent value as a **decimal** number?

a) 0100 0011 0101 0100 0000 0000 0000 0000

b) 1111 1111 1011 0100 0000 0000 0000 0000

# 5 Notes

- You are required to deliver a hard copy of your answers in the next section.
- You are encouraged to ask any questions on teams, or in person.

**Good Luck**