ECE 27000 Spring-22
Practice Problems 2

Note: The problems below will allow you to practice the material covered in week 2. A homework will be available separately. Do not attempt to submit practice problems for grading.

Solve the following problems.

1. Explain why the magnitude of an n-bit two's-complement number can be computed as for an unsigned number, except that the weight of the MSB is -2^{n-1} instead of 2^{n-1}.

2. Explain why it is possible to identify overflow in two's-complement addition when the carry in and out of the MSB is different.

3. Textbook, Chapter 2, Page 87, Problem 2.40.

4. Textbook, Chapter 2, Page 87, Problem 2.45.

5. Textbook, Chapter 2, Page 87, Problem 2.46.