CSCI 210 Assn. 1: Integer representation

This assignment is due at the beginning of class on Monday, January 19. The assignment covers material from Sections 3.1 and 3.2 of the textbook. You are responsible for all the material in those sections, beginning with Quiz 0 on Wednesday, January 21.

Submit your solutions on paper, handwritten or typed. Be neat: Particularly, don’t submit a sheet torn from a spiral notebook.

A1–1. Perform the following conversions.
   a. $101110101_{(2)}$ to hexadecimal
   b. $101110101_{(2)}$ to octal
   c. $2A2B_{(16)}$ to binary
   d. $1337_{(8)}$ to binary

A1–2. Describe in English how the bit pattern of the two’s-complement representation changes when I perform each of the following operations to an integer. (The textbook already describes how the pattern changes for “negating two’s-complement numbers” in the second full paragraph on page 26.)
   a. Double the integer.
   b. Subtract 1 from the integer.