- **What are two ways of representing zero in 1's complement form?**
- **How is zero represented in 2's complement form?**
- **Determine the 1's complement of binary number:**

  10101010
- **Determine the 2's complement of each binary number using either method:**

  1001
- **Express each decimal number in binary as an 8-bit sign-magnitude number:**

  (a) +29 (b) 285
- **Express each decimal number as an 8-bit number in the 2's complement form:**

  (a) 268 (b) +101
- **Determine the decimal value of each signed binary number in the 2's complement form:**

  (a) 10011001 (b) 01110100
- **Determine the values of the following single-precision floating-point numbers:**

  (a) 1 10000001 01001001110001000000000

  (b) 0 11001100 10000111110100100000000
- **Perform each addition in the 2's complement form**

  (a) 10001100 + 00111001 (b) 11011001 + 11100111
- **Multiply 01101010 by 11110001 in the 2's complement form.**
- **Convert each of the BCD numbers to decimal:**

  (a) 00011001 (b) 00110010
- **Convert each Gray code to binary:**

  (a) 1010 (b) 00010 (c) 11000010001
- **Convert each of the following decimal numbers to ASCII. Refer to Table 2–7.**

  (a) 1 (b) 3 (c) 6 (d) 10 (e) 18

  (f) 29 (g) 56 (h) 75 (i) 107
- **Determine each ASCII character. Refer to Table 2–7.**

  (a) 0011000 (b) 1001010
- **Determine which of the following even parity codes are in error:**

  (a) 100110010 (b) 011101010
- **Attach the proper even parity bit to each of the following bytes of data:**

  (a) 10100100 (b) 00001001 (c) 11111110