CSCI 2330 – Integer Representation Exercises

Fill in the requested values for each of the indicated representations in the specified format (**bin** = binary, **dec** = decimal). For the representations in **n** bits, your answer should be an expression in terms of **n**.

1. Unsigned, 4 bits

  a. Largest (bin)

  b. Largest (dec)

  c. Smallest (bin)

  d. Smallest (dec)

2. Signed Magnitude, 4 bits

  a. Largest (bin)

  b. Largest (dec)

  c. Smallest (bin)

  d. Smallest (dec)

3. One's Complement, 4 bits

  a. Largest (bin)

  b. Largest (dec)

  c. Smallest (bin)

  d. Smallest (dec)

4. Two's Complement, 4 bits

  a. Largest (bin)

  b. Largest (dec)

  c. Smallest (bin)

  d. Smallest (dec)

5. Unsigned, n bits

  a. Largest (dec)

  b. Smallest (dec)

6. Signed Magnitude, n bits

  a. Largest (dec)

  b. Smallest (dec)

7. One's Complement, n bits

  a. Largest (dec)

  b. Smallest (dec)

8. Two's Complement, n bits

  a. Largest (dec)

  b. Smallest (dec)