

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):