H.W. #4 CpE 100 Spring 2021

Show your work for credit (!) and put a box around each of your answers!

1. Convert the following decimal numbers into unsigned binary numbers; 45, 127, 128, and 200. (2 points)
2. Convert the following decimal numbers into signed binary numbers: 45, − 45, 127, − 127, 128, − 128, 200, and − 200. (2 points)
3. Repeat problem 2 but convert the decimal numbers into two's complement numbers. (2 points)
4. Show how to add the following numbers using two's complement: − 45 + 45, −128 + 67, and 3 + (−5). Make sure you convert the sum back to decimal. (3 points)
5. Drawn the schematic and symbol for an inverter using LTspice. Using your symbol simulate the operation of the inverter. (3 points)