HW5

1. Perform the subtraction with the following unsigned binary numbers by taking the 2's complement of the subtrahend. (a) 0101 – 0110, (b) 10110 – 1100, (c) 1011110 – 1111110, (d) 101010 – 101.
2. Repeat Problem 2, assuming the numbers are 2's complement signed numbers. Perform the subtraction and indicate whether overflow occurs.
3. Repeat Problem 3, assuming the numbers are signed-magnitude signed numbers. Perform the subtraction and indicate whether overflow occurs.
4. Design a 4-bit absolute value calculator, Z=|z|.
5. Design a 4-bit x 4-bit multiplier using four-bit adders (Ripple-Carry adders) and other logic gates.
6. Use Verilog to design the circuit in problem 5.

