Homework #1

1.11 Perform the following division in binary: 111111 ÷ 101.

1.14 Obtain the 1's and 2's complements of the following binary numbers:
(a) 11110000 (b) 00000000
(c) 11011000 (d) 01010101

1.18 Perform subtraction on the given unsigned binary numbers using the 2's complement of the subtrahend. Where the result should be negative, find its 2's complement and affix a minus sign.
(a) 10101 − 10010 (b) 10010 − 100110

1.20 Convert decimal +56 and +35 to binary, using the signed-2's-complement representation and enough digits to accommodate the numbers. Then perform the binary equivalent of (+56) + (+35), (+56) + (−35), and (−56) + (+35). Convert the answers back to decimal and verify that they are correct.

1.23 Represent the unsigned decimal numbers 694 and 538 in BCD, and then show the steps necessary to form their sum.