

Digital Electronics and Computer Engineering (E85)

J. Spjut and R. Wang

Spring 2013

Problem Set 1

Due: Monday, 1/28/2013

1) Textbook Problems

Do problems 2nd Edition: 1.6, 1.9, 1.14, 1.16, 1.68, 1.71, 1.75, 1.79, 1.80

Number Systems

- a) Compute $B_{16} + 2A_{16}$. (This could also be written as $0xB1 + 0x2A$.) The numbers are given in 8-bit unsigned binary representation. Express the sum in hexadecimal, binary, and decimal.
- b) Compute the sum in part (a) when the numbers are given in 8-bit two's complement representation. Write the result in hexadecimal, binary, and decimal.

2) Time

Please indicate how many hours you spent on this problem set. This will not affect your grade, but will be helpful for calibrating the workload for next semester's class.