

Digital Electronics and Computer Engineering (E85)

Spring 2015

Problem Set 1

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 $0xB1 + 0x2A$.) Interpret the numbers as 8-bit unsigned binary representation. Express the sum in hexadecimal, binary, and decimal.
- b) Compute the sum in part (a) when the numbers are interpreted as 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.