COMP 249 Logic circuits

Assignment #1

Due: 28-September-2009 09:00

1. Convert the following binary numbers to decimal: 10011101, 1011011.1011.
2. Convert the following decimal numbers to binary: 1854, 1904 .
3. Convert the following decimal numbers to the indicated bases:
   a. 4539.61 to octal
   b. 8961.459 to hexadecimal
4. Perform the following binary multiplication: 111001×1010111
5. The following calculation was performed by a particular breed of unusually intelligent chicken. If the base *r* used by the chicken corresponds to its total number of toes, how many toes does the chicken have on each foot?

$$\left[(43)_r + (61)_r\right] \times (35)_r = (5416)_r$$

6. Represent the decimal numbers 651 and 1904 in BCD, then show the steps necessary to form their sum.