Number Systems Homework Questions

1. Convert the following decimal values to their binary representation you can assume that we are using 16 bits and the first bit is the sign bit.
   1. 34
   2. 132
   3. 456
   4. -34
   5. 128
   6. -128
2. Convert the following binary numbers to the decimal representation. Assume the first bit is the sign bit.
   1. 00001010
   2. 11101110
   3. 10101010
   4. 11110111
3. Convert the following decimal numbers to their hexadecimal representation.
   1. 34
   2. 132
   3. 456
   4. 128
4. Convert the following hexadecimal numbers to the binary representation.
   1. AF5EEF
   2. F10F00
   3. FFFFFF
   4. DEF320
5. Convert the following binary numbers to their hexadecimal representation.
   1. 00001011
   2. 11101111
   3. 10101010
   4. 11110111
6. Add the following binary numbers (using binary addition) and display the answers as a decimal number.
   1. 10101110 + 00111010
   2. 00100010 + 00101010
   3. 11100011 + 11101010
   4. 10100010 + 00101011