# Binary Arithmetic – Homework 1

1. Convert the following denary numbers (base 10) into their binary (base 2) and equivalent.
   * 1. 29 = 11101
     2. 68 = 1000100
     3. 7 = 111
2. Convert the following binary numbers into their denary equivalent.
   * 1. 11101 = 29
     2. 110111 = 55
     3. 101110 = 46
3. Carry out the following binary additions
   * 1. 1110 + 1100 = 11010
     2. 1010 + 1011 = 10101
     3. 10111 + 1000 = 11111
4. Cary out the following binary multiplications
   * 1. 1010 x 101= 110010
     2. 1110 x 111 = 1100010
     3. 1010 x 1010 = 1100100
5. Convert the following denary numbers (base 10) into their hexadecimal (base 16) equivalents.  
   * 1. 44 = 2C
     2. 57 = 39
6. Convert the following binary numbers into hexadecimal.
   * 1. 1110110 = 76
     2. 1000101 = 45
     3. 111101 = 3D
7. Convert the following hexadecimal numbers into binary.  
   * 1. 36 = 54 = 110110
     2. 2F = 45 = 101101 (Wrong) 2F = 47 = 101111
     3. 9D = 144 + 13 = 157 = 10011101