***Assignment #1***

Q1: Find the Hexadecimal Representation for each of the following Binary numbers (**5 points**)

1. **1010 1101 🡪 10 13 🡪 AD**
2. **0010 0111 🡪 2 7 🡪 27**

Q2: Find the Decimal Representation for each of the following Hexadecimal numbers (**5 points**)

1. **8EF 🡪 8\*16\*16 + 14\*16 + 15\*1 🡪 2287**
2. **5CE 🡪 5\*16\*16 + 12\*16 + 14\*1 🡪 1486**

Q3: Find the Binary Representation for each of the following Decimal numbers (**5 points**)

1. **53 🡪 110101**
2. **885 🡪 111110101**

Q4: Each of the following hexadecimal numbers can be interpreted as representing a decimal number or a pair of ASCII codes. Give both interpretations (**5 points**).

1. **43 53 🡪 67 83 🡪 C S**
2. **31 36 🡪 49 54 🡪 1 6**

Q5: Find the double word-length 2’s complement representation of each of the following decimal numbers (**5 points**)

1. **387 🡪 0000 0000 0000 0000 0000 0001 1000 0011**

**🡪 1111 1111 1111 1111 1111 1110 0111 1100**

**🡪 1111 1111 1111 1111 1111 1110 0111 1101**

1. **-10 🡪 0000 0000 0000 0000 0000 0000 0001 1010**

**🡪 1111 1111 1111 1111 1111 1111 1110 0101**

**🡪 1111 1111 1111 1111 1111 1111 1110 0110**

Q6: Find the word-length 2’s hexadecimal answers for the (**5 points**)

1. **387A + 567B 🡪 8EF5 🡪 1000 1110 1111 0101 🡪 0111 0001 0000 1011**
2. **DF00 – 45A3 🡪 995D 🡪 1001 1001 0101 1101 🡪 0110 0110 1010 0011**

**So… for Q6 I’m not sure what the question wants… maybe 2’s complement for hexadecimal? The question looks unfinished so I am going to assume you wanted me to convert hexadecimal #’s into 2’s complement.**