NAME_____ NO._____ 3/3/2017

1. M=78. Let b = [b_n b_{n-1} … b_2 b_1] be a binary vector such that M= b_n *2^{n-1}+b_{n-1} *2^{n-2}+ … b_2 *2 + b_1
   A. (5%) Write codes to find the remainder of dividing M by 2.

   B. (5%) Write codes to find the quotient of dividing M by 2.

   C. (10%) Draw a flow chart to find b for given M.

   D. (5%) Try to emulate execution of your flow chart to find b and write down b.
   E. (10%) Write a Matlab function to implement your flow chart

2. (5%) Write codes to draw f(x)=sin(x) for x in [-2pi 2pi].

3. (5%) Write codes to draw f(x,y)=x^2+y^2, for x in [-1 1] and y in [-1 1].

4. (5%) Write codes to draw f(x,y)= sin(x+y) for x and y in [-2pi 2pi]

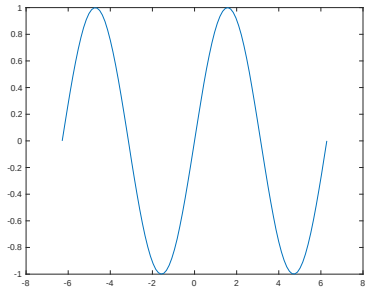
Due to AM 11:10

5. (20%) b=my_dec2bin(M)
   A. M=78; b=?
   B. M=218; b=?

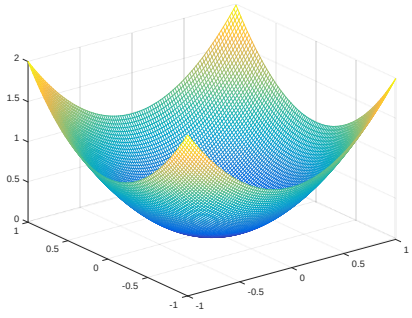
Checked by _____ time _____

6. (15%) Figures checked by _____time_____

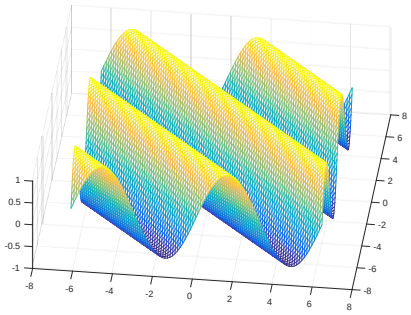
A.



B



C



7. (15%) How many ‘a’, ‘t’, ‘c’ and ‘g’ in

ss='gatcacaggtctatcaccctattaaccact cacgggagctctccatgcatttggtattttcgt ctgggggtgtgcacgcgatagcattgcga gacgctggagccggagcaccctatgtcgc agtatctgtctttgattcctgcctcattctattattt atcgcacctacgttcaatattacaggcgaac atacctacta' ?

Checked by_____time _____

Due to 12:00