1. Convert the following decimal numbers to the indicated bases.

   (a) 7562.45 to octal
   (b) 1938.257 to hexadecimal
   (c) 175.175 to binary

2. Proof the De-Morgan 1st and 2nd theorem with truth table and logic gates.
3. Reduce the following function using k-map
   F = B'D + A'BC' + AB'C + ABC'
4. Reduce the following expression using K-map. Also implemented the reduced expression using NAND or NOR gates.

   a) $(A+B)(A+\bar{B}+C)(A+\bar{C})$

   b) $A+B(A+\bar{B}+D)(B+\bar{C})(B+C+D)$

5. Simplify the Boolean function using K-Maps.

   F = X'yz + X'yz' +Xy'z' +Xy'z

6. Perform 1's and 2's complement subtraction: $(65.25)_{10} - (53.35)_{10}$