Assignment 4

1. Write program to delete the last k digits. input 23617 and k=3 output 23. k=2, 236
2. Write program to print the k^{th} digit from last. input 23617 and k=4 output 3. k=2, 1
3. Write a program to print first digit. e.g. input 23617 output 2. Input 714 output 7.

4. Enter a letter and check whether the letter is vowel or consonant.
5. Write a program to find the sum of first *n* odd numbers where n is entered by user.

6. Write a program to find the factorial of a number, where the number is entered by user. (Hints: factorial of $n = 1*2*3*...*n$).
7. Write a program using loop to print 1, 2, 4, 16, 32, 64, 128, 256.
8. Write a program to find the power of a number without using *pow()* in-built function.

9. Write function for finding smallest factor of a given number.
10. Write function to find sum of all odd factors of a given number.
11. Write function, which reads a number. If it is even then output its square. If it is odd then output its cube. Input 4 output 16. Input 5 output 125.
12. Write function to exchange the digits before and after decimal point.
13. Write a function to check whether there is any prime number whining an interval.
14. Write a function to find the product of all odd factors of a given number.
15. Write a function that raises an integer to a positive integer power. Call the function x_to_the_n taking two integer arguments x and n. Have the function return a long int, which represents the results of calculating x^n.
16. An equation of the form

ax2 + bx + c = 0

is known as a quadratic equation.The values of a, b, and c in the preceding example represent constant values. So

4x^2- 17x - 15 = 0

represents a quadratic equation where a = 4, b = –17, and c = –15.The values of x that satisfy a particular quadratic equation, known as the roots of the equation, can be calculated by substituting the values of a, b, and c into the following two

formulas:
If the value of b^2–4ac, called the discriminant, is less than zero, the roots of the equation, x1 and x2, are imaginary numbers.
Write a program to solve a quadratic equation.The program should allow the user to enter the values for a, b, and c. If the discriminant is less than zero, a message should be displayed that the roots are imaginary; otherwise, the program should then proceed to calculate and display the two roots of the equation.

17.Function to calculate the absolute value of a number and Modify this program so that the value of epsilon is passed as an argument to the function.Try experimenting with different values of epsilon to see the effect that it has on the value of the square root.