1.Write a function that checks if a given number is a perfect number. A perfect number is equal to the sum of its proper divisors (excluding itself)

#include <stdio.h>

int Perfect (int num) {

int s = 0;

for(int i = 1; i <= num/2; i++) {

if(num % i == 0)

sum =sum+i;}

if(sum==num)

printf(“is a perfect number”);

2. Write a function that checks if a given integer is a palindrome. A palindrome number remains the same when its digits are reversed.

#include <stdio.h>

int Palindrome(int num) {

int oNum = num, rev = 0, rem;

while(num != 0) {

rem = num % 10;

rev = rev\* 10 + rem;

num /= 10;}

if (oNum == rev)

printf(“is a palindrome number”);

}

3. Write a function that counts the number of vowels (a, e, i, o, u) in a given string.

#include <stdio.h>

int count (const char \*str) {

int c = 0;

char ch;

while (\*str != '\0') {

ch = tolower(\*str);

if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

count++;

}

str++;

}

return c;

printf(“Number of vowels”,c);

}

4. Write a function that reverses a given list of integers.

#include <stdio.h>

void rev (int a[], int s) {

int t;

for(int i = 0; i < size / 2; i++) {

t = a[i];

a[i] = a[s - 1 - i];

a[s - 1 - i] = temp;

}

}

5. Write a function that calculates the factorial of a non-negative integer.

#include <stdio.h>

int fac (int num) {

if(num == 0 || num == 1) {

return 1;

} else {

return num \* fac (num - 1);

}

}