Write a function to calculate the area of a circle. (TSRS)

```c
#include<stdio.h>
float area(int);
int main ()
{
    int r;
    printf("Enter Radius of a Circle = ");
    scanf("%d",&r);
    float res= area(r);
    printf("Area of a Circle = %.3f", res);
    printf("\n");
    return 0;
}
float area(int a)
{
    return (3.14*a*a);
}
```

Write a function to calculate simple interest. (TSRS)

```c
#include<stdio.h>
float cal(int,int,int);
int main ()
{
    int p,r,t;
    float si=0;
    printf("Enter Principle amount = ");
    scanf("%d",&p);
    printf("Enter annual interest rate = ");
    scanf("%d",&r);
    printf("Enter time (in years) = ");
    scanf("%d",&t);
    si= cal(p,r,t);
    printf("Simple Interest = %.3f", si);
    printf("\n");
    return 0;
}
float cal(int a,int b, int c)
{
    return (a*b*c/100);
}
```

Write a function to check whether a given number is even or odd. Return 1 if the

number is even, otherwise return 0. (TSRS)

```c
#include<stdio.h>
int check(int);
int main ()
{
    int n;
    printf("Enter a number = ");
    scanf("%d",&n);
    int res= check(n);
    if(res==1)
    printf("\nnumber is even");
    else
    printf("\nnumber is odd");
    printf("\n");
    return 0;
}
int check(int a)
{
    if(a%2==0)
    return 1;
    else
    return 0;
}
```

Write a function to print first N natural numbers (TSRN)

```c
#include<stdio.h>
void printN(int);
int main ()
{
    int n;
    printf("Enter a number = ");
    scanf("%d",&n);
    printN(n);
    printf("\n");
    return 0;
}
void printN(int a)
{
    for(int i=1;i<=a; i++)
    printf("%d ",i);
}
```

Write a function to print first N odd natural numbers. (TSRN)

```c
#include<stdio.h>
void printOdd(int);
int main ()
{
    int n;
    printf("Enter a number = ");
    scanf("%d",&n);
```

```
    printOdd(n);
    printf("\n");
    return 0;
}
void printOdd(int a)
{
    for(int i=1;i<=a; i++)
       if(i%2==0)
       continue;
       else
       printf("%d ",i);
}
```

Write a function to calculate the factorial of a number. (TSRS)

```
#include<stdio.h>
int fact(int);
int main ()
{
    int n,res;
    printf("Enter a number = ");
    scanf("%d",&n);
    res= fact(n);
    printf("Factorial of a %d = %d",n,res);
    printf("\n");
    return 0;
}
int fact(int a)
{
   int ft=1;
   for(int i=2; i<=a; i++)
    ft=ft*i;
   return ft;
}
```

Write a function to calculate the number of combinations one can make from n items

and r selected at a time. (TSRS)

```
#include<stdio.h>
int fact(int);
int combination(int,int);
int main ()
{
    int n,r,comb;
    printf("Enter a total no. of items = ");
    scanf("%d",&n);
    printf("Enter a no. of items selected = ");
    scanf("%d",&r);
```

```
    comb= combination(n,r);
    printf("Combination can make from %d items and %d selected at a time =
%d",n,r,comb);
    printf("\n");
    return 0;
}
int fact(int a)
{
   int ft=1;
   for(int i=2; i<=a; i++)
    ft=ft*i;
   return ft;
}
int combination(int a, int b)
{
    int c= fact(a)/(fact(b)*fact(a-b));
    return c;
}
```

Write a function to calculate the number of arrangements one can make from n items

and r selected at a time. (TSRS)

```
#include<stdio.h>
int fact(int);
int permutation(int,int);
int main ()
{
    int n,r,perm;
    printf("Enter a total no. of items = ");
    scanf("%d",&n);
    printf("Enter a no. of items selected = ");
    scanf("%d",&r);
    perm= permutation(n,r);
    printf("arrangement can make from %d items and %d selected at a time =
%d",n,r,perm);
    printf("\n");
    return 0;
}
int fact(int a)
{
   int ft=1;
   for(int i=2; i<=a; i++)
    ft=ft*i;
   return ft;
}
```

```
int permutation(int a, int b)
{
    int c= fact(a)/fact(b);
    return c;
}
```

Write a function to check whether a given number contains a given digit or not.

(TSRS)

```
#include<stdio.h>
int digit(int,int);
int main ()
{
    int n,result,d;
    printf("Enter a number : ");
    scanf("%d",&n);
    printf("Enter a number : ");
    scanf("%d",&d);
    result= digit(n,d);
    if(result==1)
    printf("yes it contain your digit");
    else
    printf("No it's not contain a digit");
    printf("\n");
    return 0;
}
int digit(int a, int b)
{
    do
    {
        if(a%10==b)
        {
            return 1;

        }
        else
        a=a/10;

    }while(a!=0);
    return 0;
}
```

Write a function to print all prime factors of a given number. For example, if the

number is 36 then your result should be 2, 2, 3, 3. (TSRN)

```
#include<stdio.h>
void primefact(int n)
{
    int i;
    for(i=2; n!=1; i++)
    {
        while(n%i==0)
        {
            n=n/i;
            printf("%d , ",i);
        }
    }
}
int main()
{
   int n;
   printf("Enter your number = ");
   scanf("%d",&n);
   primefact(n);
   printf("\n");
   return 0;
}
```