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

#include<stdio.h>

float area(float);

int main()

{

float r;

printf("Enter the radius: ");

scanf("%f",&r);

printf("Area of your circle is %.2f",area(r));

return 0;

}

float area(float r)

{

return 3.14\*r\*r;

}

1. **Write a function to calculate simple interest. (TSRS)**

#include<stdio.h>

float SI(float,float,float);

int main()

{

float p,r,t;

printf("Enter the values of p,r,t respectively: ");

scanf("%f%f%f",&p,&r,&t);

printf("Simple interest is %.2f",SI(p,r,t));

return 0;

}

float SI(float p,float r,float t)

{

return p\*r\*t/100;

}

1. **Write a function to check whether a given number is even or odd. Return 1 if the number is even, otherwise return 0. (TSRS)**

#include<stdio.h>

int even\_odd(int);

int main()

{

int a;

printf("Enter a number: ");

scanf("%d",&a);

if(even\_odd(a))

printf("%d is a even number",a);

else

printf("%d is a odd number",a);

return 0;

}

int even\_odd(int a)

{

return !(a%2);

}

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

#include<stdio.h>

void printN(int);

int main()

{

int n;

printf("Enter a value: ");

scanf("%d",&n);

printN(n);

return 0;

}

void printN(int n)

{

int i;

for(i=1;i<=n;i++)

{

printf("%d ",i);

}

}

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

#include<stdio.h>

void printN(int);

int main()

{

int n;

printf("Enter a value: ");

scanf("%d",&n);

printN(n);

return 0;

}

void printN(int n)

{

int i;

for(i=1;i<=n\*2;i+=2)

{

printf("%d ",i);

}

}

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

#include<stdio.h>

int fact(int);

int main()

{

int n;

printf("Enter a number: ");

scanf("%d",&n);

printf("Factorial of %d is %d",n,fact(n));

return 0;

}

int fact(int n)

{

int i,f=n;

for(i=n-1;i>=1;i--)

{

f=f\*i;

}

return f;

}

1. **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 comb(int,int);

int main()

{

int n,r;

printf("Enter number of items: ");

scanf("%d",&n);

printf("Enter number of selection: ");

scanf("%d",&r);

printf("Number of combination is %d",comb(n,r));

return 0;

}

int fact(int n)

{

int i,f=n;

if(n==0)

return 1;

for(i=n-1;i>=1;i--)

{

f=f\*i;

}

return f;

}

int comb(int n,int r)

{

return fact(n)/fact(n-r)/fact(r);

}

1. **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 comb(int,int);

int main()

{

int n,r;

printf("Enter number of items: ");

scanf("%d",&n);

printf("Enter number of selection: ");

scanf("%d",&r);

printf("Number of arrangement is %d",comb(n,r));

return 0;

}

int fact(int n)

{

int i,f=n;

if(n==0)

return 1;

for(i=n-1;i>=1;i--)

{

f=f\*i;

}

return f;

}

int comb(int n,int r)

{

return fact(n)/fact(n-r);

}

1. **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 a,b;

printf("Enter the number and digit respectively: ");

scanf("%d%d",&a,&b);

if(digit(a,b))

{

printf("%d contains %d",a,b);

}

else

{

printf("%d doesn't contain %d",a,b);

}

return 0;

}

int digit(int a,int b)

{

while(a)

{

if(a%10==b)

return 1;

a/=10;

}

return 0;

}

1. **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 primeFactor(int);

int ifPrime(int);

int main()

{

int a;

printf("Enter a number: ");

scanf("%d",&a);

primeFactor(a);

return 0;

}

void primeFactor(int a)

{

int i,n;

n=a;

for(i=2;i<=a;i++)

{

if(ifPrime(i))

{

while(n%i==0)

{

printf("%d ",i);

n/=i;

}

}

}

}

int ifPrime(int n)

{

int i;

for(i=2;i<=n/2;i++)

{

if(n%i==0)

return 0;

}

return 1;

}