Q1: Write a function to calculate the area of a circle. (TSRS)

Answer:

#include<stdio.h>

float circle(float);

int main()

{

    float a;

    printf("Enter the radius of circle: ");

    scanf("%f",&a);

    printf("The Area of Circle is: %f",circle(a));

    return 0;

}

float circle(float r)

{

    float Area;

    Area=3.14159\*r\*r;

    return Area;

}

Q2: Write a function to calculate simple interest. (TSRS)

Answer:

#include<stdio.h>

float SimpleInterest(float,float,float);

int main()

{

    float p,r,t;

    printf("Enter the Principle Amount: ");

    scanf("%f",&p);

    printf("Enter the rate of interest Amount: ");

    scanf("%f",&r);

    printf("Enter the Time Amount: ");

    scanf("%f",&t);

    printf("Simple interest is: %f",SimpleInterest(p,r,t));

    return 0;

}

float SimpleInterest(float p,float r,float t)

{

    int SI=p\*r\*t/100;

    return SI;

}

Q3: Write a function to check whether a given number is even or odd. Return 1 if the number is even, otherwise return 0. (TSRS)

Answer:

#include<stdio.h>

int digit(int);

int main()

{

    int p;

    printf("Enter the Principle Amount: ");

    scanf("%d",&p);

    if(digit(p))

        printf("This is even Number");

    else

        printf("This is odd number");

}

int digit(int a)

{

    if(a%2==0)

    {

        return 1;

    }

    else

    {

        return 0;

    }

}

Q4: Write a function to print first N natural numbers (TSRN)

Answer:

#include<stdio.h>

int digit(int);

int main()

{

    int p;

    printf("Enter the Number: ");

    scanf("%d",&p);

    digit(p);

}

int digit(int n)

{

    int i;

    for(i=1;i<=n;i++)

    {

        printf("%d \n",i);

    }

}

Q5: Write a function to print first N odd natural numbers. (TSRN)

Answer:

#include<stdio.h>

int digit(int);

int main()

{

    int p;

    printf("Enter the Number: ");

    scanf("%d",&p);

    digit(p);

}

int digit(int n)

{

    int i,x=1;

    for(i=1;i<=n;i++)

    {

        printf("%d \n",x);

        x+=2;

    }

}

Q6: Write a function to calculate the factorial of a number. (TSRS)

Answer:

#include<stdio.h>

long int digit(long int);

int main()

{

    long int p;

    printf("Enter the Number: ");

    scanf("%ld",&p);

    printf("The Factorial is: %ld",digit(p));

}

long int digit(long int i)

{

    long int x=1;

    for( ;i>=1;i--)

    {

        x\*=i;

    }

    return x;

}

Q7: Write a function to calculate the number of combinations one can make from n items and r selected at a time. (TSRS)

Answer:

#include<stdio.h>

int fact(int);

int comb(int,int);

int main()

{

    int n,r;

    printf("Enter the two numbers");

    scanf("%d%d",&n,&r);

    printf("This is the combinations: %d",comb(n,r));

}

int fact(int n)

{

    int i,f=1;

    for(i=1;i<=n;i++)

    {

    f=f\*i;

    }

    return f;

}

int comb(int n,int r)

{

    int c;

    c=fact(n)/(fact(r)\*fact(n-r));

    return c;

}

Q8: Write a function to calculate the number of arrangements one can make from n items and r selected at a time. (TSRS)

Answer:

#include<stdio.h>

int fact(int);

int comb(int,int);

int main()

{

    int n,r;

    printf("Enter the two numbers");

    scanf("%d%d",&n,&r);

    printf("This is the combinations: %d",comb(n,r));

}

int fact(int n)

{

    int i,f=1;

    for(i=1;i<=n;i++)

    {

    f=f\*i;

    }

    return f;

}

int comb(int n,int r)

{

    int c;

    c=fact(n)/fact(n-r);

    return c;

}

Q9: Write a function to check whether a given number contains a given digit or not. (TSRS)

Answer:

#include<stdio.h>

int digitS(int,int);

int main()

{

    int Number,digit;

    printf("Enter the Number: ");

    scanf("%d",&Number);

        printf("Enter the Digit: ");

    scanf("%d",&digit);

    if(digitS(Number,digit))

        printf("This digit is available in the given Number");

    else

        printf("This digit is not available in the given Number");

}

int digitS(int a,int b)

{

    int r,q=a,count=0;

    while(q>0)

    {

        r=q%10;

        q=q/10;

        if(r==b)

        {

            return 1;

        }

    }

    return 0;

}

Q10: 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)

Answer:

#include<stdio.h>

void digit(int);

int main()

{

    int p;

    printf("Enter the Number: ");

    scanf("%d",&p);

    digit(p);

}

void digit(int i)

{

    int a,b,count=0;

    for(a=1;i>=a;a++)

    {

        if(i%a==0)

        {

            for(b=1;b<=a;b++)

            {

                if(a%b==0 && b!=1 && b!=a)

                {

                    count++;

                    break;

                }

            }

            if(!count)

            {

                printf("%d\n",a);

            }

        }

    }

}