

1.To find GCD of two numbers

```
#include <stdio.h>

int main(int argc,char *argv[])
{
    int a,b,small,i;
    a=atoi(argv[1]);
    b=atoi(argv[2]);
    if(a>b)
        small=b;
    else
        small=a;
    for(i=small;i>=1;i--)
    {
        if((a%i)==0&&(b%i)==0)
        {
            printf("%d",i);
            break;
        }
    }
    return 0;
}
```

2. To find the lcm of two numbers

```
#include <stdio.h>

int main(int argc, char *argv[])
{
    int a, b, large;
    a = atoi(argv[1]);
    b = atoi(argv[2]);
    if (a > b)
        large = a;
    else
        large = b;
    while (1)
    {
        if ((large % a) == 0 && (large % b) == 0)
        {
            printf("%d", large);
            break;
        }
        large++;
    }
    return 0;
}
```

3. To find the Factorial of a non negative number

```
#include <stdio.h>

int main(int argc, char *argv[])
{
    int n, fact=1, i;
    n=atoi(argv[1]);
    for(i=1; i<=n; i++)
    {
        fact=fact*i;
    }
    printf("%d", fact);
    return 0;
}
```

4. To find the area of a circle ($\text{area} = 3.14 * r * r$), when diameter is given.

```
#include <stdio.h>

#define PI 3.14

int main(int argc, char *argv[])
{
    float dia, radius, area=0;
    dia=atoi(argv[1]);
    radius=0.5*dia;
    area=PI*radius*radius;
    printf("%.2f", area);
    return 0;
}
```

5. To check whether the given year is Leap year or not.

```
#include <stdio.h>
```

```
int main(int argc, char *argv[])
```

```
{
```

```
    int year;
```

```
    year=atoi(argv[1]);
```

```
    if(year%100==0)
```

```
    {
```

```
        if(year%400==0)
```

```
        printf("Leap year");
```

```
        else
```

```
        printf("not leap year");
```

```
    }
```

```
    else
```

```
        if(year%4==0)
```

```
        printf("leap year");
```

```
        else
```

```
        printf("not leap year");
```

```
        return 0;
```

```
}
```

6. To find the area of triangle when base and height is given.

```
#include <stdio.h>

int main(int argc,char *argv[])
{
    float height,base,area;
    height=atoi(argv[1]);
    base=atoi(argv[2]);
    area=0.5*base*height;
    printf("%.2f",area);
    return 0;
}
```

7. To print the Fibonacci series.

Input=6 Output=1 1 2 3 5 8

```
#include <stdio.h>

int main(int argc,char *argv[])
{
    int n,first=1,sec=1,next,i;
    n=atoi(argv[1]);
    for (i=0;i<n;i++)
    {
        if (i<=1)
            next=1;
        else
        {
            next=first+sec;
            first=sec;
            sec=next;
        }
        printf("%d ",next);
    }
    return 0;
}
```

8. To check whether the given number is prime or not.

```
#include <stdio.h>

int main(int argc, char *argv[])
{
    int n, i, count=0;
    n=atoi(argv[1]);
    for(i=1; i<=n; i++)
    {
        if(n%i==0)
        {
            count++;
        }
    }
    if(count==2)
        printf("prime number");
    else
        printf("not prime number ");
    return 0;
}
```

9. To check whether given number is strong number or not.

```
#include<stdio.h>

int fact(int);

int main(int argc, char *argv[])
{
    int num,d,n,res=0,i,count=0,x;
    n=atoi(argv[1]);
    num=n;
    x=num;
    while(n!=0)
    {
        n=n/10;
        count++;
    }
    for(i=0;i<count;i++){
        if(x>0)
        {
            d=x%10;
            res=res+fact(d);
            x=x/10;
        }
    }
    if(res==num)
    {
        printf("strong number");
    }
    else printf("not strong number");
```



```
    return 0;
}
int fact(int x)
{
    if(x==0)
        return 1;
    else
        return x*fact(x-1);
}
```

10. To check whether number is palindrome or not.

```
#include <stdio.h>

int main(int argc, char *argv[])
{
    int num, rev=0, digit, orig;
    num=atoi(argv[1]);
    orig=num;

    while(num>0){
        digit=num%10;
        rev=rev*10+digit;
        num=num/10;
    }

    if(orig==rev)
    {
        printf("palindrome");
    }
    else
        printf("not palindrome");
    return 0;
}
```