

\*\*\*\*\*/

**Q1.**/\*\*Find the factorial of a number\*\*/

```
#include <stdio.h>
int factorial(int n)
{
    if(n==1) return(1);
    else
        return(n*factorial(n-1));
}
int main()
{
    int a,fact;
    printf("\nEnter any number");
    scanf("%d",&a);
    fact=factorial(a);
    printf("factorial value= %d", fact);

    return 0;
}
```

**Q-2.**/\*\*Find max number and also find leader of number\*\*/

```
#include <stdio.h>
int find_max(int n)
{
    int next_num,largest=0,i;
    for(i=0; i<n; i++)
    {
        printf("Enter next number\n");
        scanf("%d",&next_num);
        if(next_num>largest)
            largest=next_num;
    }
    return(largest);
}
int count_leader(int n)
{
    int next_num,leader=0,i,count=0;
    for(i=0; i<n; i++)
    {
        printf("\nEnter next number\n");
        scanf("%d",&next_num);
        if(next_num>leader)
        {
            leader=next_num;
            count++;
        }
    }
}
```

```

    return(count);
}
int main()
{
    int a;
    a=find_max(10);
    printf("\nmax is:%d",a);
    a=count_leader(20);
    printf("\nnno of leader are %d",a);

```

```

    return 0;
}

```

**Q-3.**/\*\*Find the sum of digit of a given number\*\*/

```

#include <stdio.h>

```

```

int sod(int n)
{
    if(n==0) return(n);
    else
        return(n%10+sod(n/10));

```

```

}
int main()
{
    int a,s;
    printf("enter any number\n");
    scanf("%d",&a);
    s=sod(a);
    printf("sum of digit of %d=%d", a,s);

```

```

    return 0;
}

```

**Q-4.**/\*\*Find the greatest common factor\*\*/

```

#include <stdio.h>

```

```

int gcd(int m,int n)
{
    int t;
    if(m%n==0) return(n);
    else

```

```

    return(t=gcd(n,m%n));
}
int main()
{
    int g,h,a,b,c;
    printf("enter 3 number\n");
    scanf("%d%d%d",&a,&b,&c);
    g=gcd(a,b);
    h=gcd(g,c);
    printf("\ngcd of %d %d %d is %d",a,b,c,h);

    return 0;
}

```

**Q-5.**/\*\*Find x to the power y.Value of x and y given by the user\*\*/

```

#include <stdio.h>
int power(int a,int b)
{
    if(b==0)
        return(1);
    else
        return(a*power(a,(b-1)));
}
int main()
{
    int x,y,p;
    printf("enter base and power\n");
    scanf("%d %d",&x,&y);
    p=power(x,y);
    printf("value of %d to the power %d=%d",x,y,p);

    return 0;
}

```