

# Finding Value of sin/cos Series

## Program (sin series)

**/\*to find sum of the series:**

**$x - x^3/3! + x^5/5! \dots + x^n/n!$  \*/**

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

```
#include<conio.h>
```

```
void main(){
```

```
float x, term, sum;
```

```
int n;
```

```
clrscr();
```

```
printf("Enter value of x, n:")
```

```
scanf("%f", &x);
```

```
scanf("%d", &n);
```

```
term=x;
```

```
sum=x;
```

```
for(int i=3; i<=n; i+=2) {
```

```
    term = - term * x * x / (i * (i - 1));
```

```
    sum = sum + term;
```

```
}
```

```
printf("\nsum=%7.3f", sum);
```

```
getch();
```

```
}
```

Input	Output
X = 0.5236	0.500
n = 7	

## Program :cos series

**/\*to find sum of the series:**

**1 - x<sup>2</sup>/2! + x<sup>4</sup>/4!.....x<sup>n</sup>/n! \*/**

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

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
float x, term, sum; int n;
```

```
clrscr();
```

```
printf("Enter value of x, n:")
```

```
scanf("%f", &x);
```

```
scanf("%d", &n);
```

```
term=1;
```

```
sum=1;
```

```
for(int i=2; i<=n; i+=2) {
```

```
    term = - term * x * x / (i * (i - 1));
```

```
    sum = sum + term;
```

```
}
```

```
printf("\nsum=%7.3f", sum); getch();
```

```
}
```

Input	Output
x = 1.047 n = 8	0.500