

```
[1]: def greg(x):  
    n=0  
    a=0  
    error_bound = (x**(2*n+1)/(2*n+1))  
    if 0 <= x <= 1:  
        while error_bound>0.0001:  
            n+=1  
            error_bound = (x**(2*n+1)/(2*n+1))  
        for(i in range(0, n-1):  
            a+=((-1)**i*x**(2*i+1)/(2*i+1))  
        second_n=(2*n+1)  
        return (a, second_n, error_bound)  
  
    else:  
        print("Error!")
```

```
[15]: greg(-1)
```

```
Error!
```

```
[16]: greg(0)
```

```
[16]: (0, 1, 0.0)
```

```
[17]: greg(0.25)
```

```
[17]: (0.24479166666666666, 7, 8.719308035714285e-06)
```