

```
In [1]: #Write a Python program to find area of a circle using math function.
import math

r = float(input('Enter the radius of the circle :'))
area = math.pi * r * r

print("Area of the circle is : %.2f" %area)
```

Enter the radius of the circle :4  
Area of the circle is : 50.27

```
In [1]: #Write a program to find Area of Regular Polygon using math function.
from math import tan, pi
n_sides=int(input("enter the number of sides:"))
s_length=float(input("enter the length of side:"))
p_area=n_sides*(s_length**2)/(4*tan(pi/n_sides))
print("the area of Polygon is:", p_area)
```

enter the number of sides:4  
enter the length of side:5  
the area of Polygon is: 25.000000000000004

```
In [3]: #Write a program to find Area of a Segment of a Circle Formula using m
ath function.
import math
def area_of_segment(radius,angle) :
    area_of_sector=pi*(radius*radius) *math.sin((angle*pi)/360)
    area_of_traingle=1/2*(radius*radius)*math.sin((angle*pi)/180)
    return area_of_sector-area_of_traingle;
radius=10.0
angle=90.0
print("area of minor segment=", area_of_segment(radius, angle))
print("Area of major segment",area_of_segment(radius, (360-angle)))
```

area of minor segment= 172.1441469079183  
Area of major segment 272.1441469079183

```
In [4]: #Write a python program to shuffle list l1=[100,1,2,3,30,40,"hai","hell  
o"].  
from random import shuffle  
list=[100, 1,2,3,30,40,'hai','hello']  
shuffle(list)  
print(list)  
  
[30, 3, 40, 'hai', 2, 100, 1, 'hello']
```

```
In [1]: #Write a program to generate random numbers between 1,10000 and differe  
nce between each random number is 50.  
import random  
randomlist=[]  
for i in range(0,10000):  
    randomlist.append(random.randrange(1,1000,50))  
print('printing list of random numbers')  
print(randomlist)
```

```
printing list of random numbers  
[501, 351, 651, 701, 551, 1, 701, 651, 501, 951, 301, 751, 501, 501, 5  
1, 651, 901, 1, 351, 351, 301, 101, 301, 601, 401, 101, 401, 201, 601,  
801, 701, 351, 751, 351, 601, 901, 701, 901, 351, 401, 451, 101, 501,  
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751, 601, 301, 951, 901, 751, 601, 501, 701, 551, 801, 351, 751, 851, 8  
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851, 51, 351, 251, 1, 301, 51, 201, 501, 901, 301, 651, 651, 751, 101,  
501, 201, 851, 301, 601, 651, 851, 251, 651, 351, 601, 601, 951, 401,  
1, 501, 801, 901, 51, 401, 651, 251, 701, 301, 201, 201, 351, 501, 951,  
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401, 751, 401, 651, 901, 401, 201, 301, 851, 401, 851, 451, 1, 551, 60  
1, 101, 551, 201, 351, 51, 651, 301, 651, 901, 151, 501, 701, 401, 101,  
701, 401, 801, 951, 551, 201, 51, 501, 651, 401, 551, 651, 1, 551, 851,  
551, 551, 401, 951, 251, 251, 701, 751, 651, 451, 601, 1, 301, 251, 1,  
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701, 201, 101, 301, 351, 501, 251, 251, 851, 801, 151, 401, 301, 201, 9  
01, 901, 401, 101, 701, 51, 751, 1, 101, 601, 401, 451, 801, 851, 251,  
601, 801, 1, 51, 551, 651, 301, 751, 551, 751, 151, 101, 901, 801, 801,  
151, 501, 201, 151, 51, 751, 951, 101, 601, 151, 201, 1, 351, 801, 951,  
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851, 301, 301, 1, 401, 751, 351, 451, 851, 251, 1, 401, 351, 451, 51, 4  
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1, 451, 451, 1, 351, 51, 101, 551, 51, 51, 351, 551, 601, 151, 51, 301,
151, 901, 251, 951, 501, 401, 451, 301, 801, 751, 101, 1, 151, 401, 60
1, 801, 801, 451, 501, 951, 351, 501, 351, 51, 51, 1, 601, 901, 1, 251,
501, 701, 901, 701]
```

```
In [3]: #Write a python program by using math module to find
import math
print("sin 60=",math.sin(60))
print("cos pi=",math.cos(math.pi))
print("tan 90=",math.tan(90))
print("angle of sin 0.866025=",math.sin(0.8660254037844386))
print("5^8=",math.pow(5,math.e))
print("log(1024)base 2=",math.log2(1024))
print("log(1024)base 10=",math.log10(1024))
print ("floor value of(23.56)=",math.floor(23.4))
print("ceeling value of(23.56))=",math.ceil(23.56))
```

```
sin 60= -0.3048106211022167
cos pi= -1.0
tan 90= -1.995200412208242
angle of sin 0.866025= 0.7617599814162892
5^8= 79.43235916621322
log(1024)base 2= 10.0
log(1024)base 10= 3.010299956639812
floor value of(23.56)= 23
ceeling value of(23.56))= 24
```