In [1]:
```
import math
r = float(input("Enter the radius of the circle: "))
area = math.pi* r * r
print("%.2f" %area)
```

```
Enter the radius of the circle: 4
50.27
```

In [2]:
```
from math import tan, pi
n_sides = int(input("Input number of sides: "))
s_length = float(input("Input the length of a side: "))
p_area = n_sides * (s_length ** 2) / (4 * tan(pi / n_sides))
print("The area of the polygon is: ",p_area)
```

```
Input number of sides: 4
Input the length of a side: 2
The area of the polygon is:  4.000000000000001
```

In [3]:
```
import math
pi = 3.14159
def area_of_segment(radius, angle):
    area_of_sector = pi *  (radius * radius) * (angle / 360)
    area_of_triangle = 1 / 2 *  (radius * radius) * math.sin((angle * pi
) / 180)
    return area_of_sector - area_of_triangle;
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 = 28.53975000004401
Area of major segment = 285.6192499996039
```

In [8]:
```
import random
a = [100,1,2,30,40,"hai","hello"]
print ("The original list is : " + str(a))
random.shuffle(a)
print ("The shuffled list is : " +  str(a))
```

```
The original list is : [100, 1, 2, 30, 40, 'hai', 'hello']
The shuffled list is : ['hai', 40, 30, 2, 'hello', 1, 100]
```

In [1]:
```
import random
print('random number of list is:')
print(random.choice(range(1,10000)))
print('random number from range is:')
print(random.randrange(1,10000,50))
```

```
random number of list is:
1211
random number from range is:
451
```

In [2]:
```
import math
print('sin60:',math.sin(60))
print('cos(pi):',math.pi)
print('tan90:',math.tan(90))
print('angle of 0.8660:',math.degrees(math.sin(0.8660254037844386)))
print('5^8:',math.pow(5,8))
print('Square root of 400:',math.sqrt(400))
print('The value of 5^e:',math.pow(5,math.e))
print('The value of Log(1024), base 2:',math.log2(1024))
print('The value of Log(1024), base 10:',math.log10(1024))
print('The Floor and Ceiling value of 23.56:',math.floor(23.56))
```

```
sin60: -0.3048106211022167
cos(pi): 3.141592653589793
tan90: -1.995200412208242
angle of 0.8660: 43.64563193711739
5^8: 390625.0
Square root of 400: 20.0
The value of 5^e: 79.43235916621322
The value of Log(1024), base 2: 10.0
The value of Log(1024), base 10: 3.010299956639812
The Floor and Ceiling value of 23.56: 23
```