Assignment-5

Name: A.Rajyasri

Roll no:321910302053

Branch –CSE

Section:B2

1. **Python program to find area of a circle using math function**
   ```
   import math
   def  area_of_circle(r):  a  =
       r**2 * math.pi return a
   r = float(input("Enter the radius of the circle: ")) print("%.2f"
   %area_of_circle(r))
   ```

   Output:-
    Enter the radius of the circle: 3 28.27

2. **Program to find area of regular polygon**
   ```
   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)
   ```

   Output:- Input number of sides: 4 Input the
   length of a side: 20

   The area of the polygon is: 400.00000000000006

3. Program to generate random numbers between 1 to 1000

```python
import random
def Rand(start, end, num): res = []
    for j in range(num): res.append(random.randint(start, end))
    return res
num = 50
start = 1
end =  1000 print(Rand(start, end,
num))
```

Output:- [118, 763, 406, 393, 144, 486, 984, 201, 421, 166, 477,
71, 228, 867, 799, 686, 131, 134, 983, 105, 39, 911, 522, 850, 287,
74, 668, 585, 958, 639, 273, 938, 877, 974, 506, 973, 158, 402,
644, 708, 954, 673, 116, 958, 247, 380, 615, 55, 855, 188]

4. 4. By using math module ,write a python program to find sin(60°) cos(pi) tan(90°)
5^8
squareroot 400
floor and ceiling value of 23.56

```python
import math
print("The value of sin(60°) :",str(math.sin(math.radians(60)))) print("The value of
cos(pi) :",str(math.cos(math.pi))) print("The value of tan(90°)
:",str(math.tan(math.pi/2))) print("The value of 5^8 :",str(math.pow(5,8)))
print("squareroot of 400 :",math.sqrt(400))

print("Floor and ceiling values of 23.56
:",math.floor(23.56),"and",math.ceil(23.56))
```

Output:-
The value of sin(60°) : 0.8660254037844386 The value of
cos(pi) : -1.0
The value of tan(90°) : 1.633123935319537e+16 The value of 5^8 :
390625.0
squareroot of 400 : 20.0
Floor and ceiling values of 23.56 : 23 and 24