python Assignment-3

1. area of circle using math-function:

```
from math import pi
r = float(input("Input the radius of the circle :"))
print("The area of the circle with radius "+str(r)+" is :"+str(pi*r**2
```

2. area of Regular polygon:

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

4. Shuffle list:

```
from random import shuffle
li = [100, 1, 2, 3, 30, 40, "hai", "hello"]
shuffle(li)
print(li)
```

3. Area of segment of a circle:

```
import math
pi = 3.14
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 = int(input("Enter the radius of circle :-"))
angle = 90.0
print("Area of minor segment =", area_of_segment(radius, angle))
print("Area of major segment =", area_of_segment(radius, (360-
                                                  angle)))
```

5. Random Numbers:-

```
import random
print(random.randrange(1, 10000, 50)).
```

6. Math functions:-

```
import math.
print("The value of sin(60) = {}\n".format(math.sin(math.pi/3)))
print("The value of cos(pi) = {}\n".format(math.cos(math.pi)))
print("The value of tan(90) = {}\n".format(math.tan(math.pi/2)))
print("the value of angle of sin(0.8660254037844386) = {}\n".format
                                    (math.asin(0.8660254037844386)))
print("The value of 5^8 = {}\n".format(pow(5,8)))
print("The value of square root of 400 = {}\n".format(math.sqrt(400)))
print("The value of 5^e = {}\n".format(pow(5,2.71828)))
print("The value of log(1024) at base 2 = {}\n".format(math.log2(1024)))
print("The value of log(1024 at base 10 = {}\n".format(math.log10(1024)))
print("the floor value of 23.56 = {}\n".format(math.floor(23.56)))
print("The ceil value of 23.56 = {}\n".format(math.ceil(23.56))).
```