**Statistics Module**

**mean():**

import statistics  
data=[1,2,3,4,5,6]  
x=statistics.mean(data)  
print("mean is",x)

**output:**

mean is 3.5

**median():**

import statistics  
data=[1,2,3,4,5,6,7]  
data1=[1,2,3,4,5,6,7,8]  
x=statistics.median(data)  
y=statistics.median(data1)  
print("median for odd number of element is",x)  
print("median for even number of element is",y)

**output:**

median for odd number of element is 4

median for even number of element is 4.5

**median\_low() and median\_high():**

import statistics  
data1=[1,2,3,4,5,6,7,8]  
y=statistics.median\_low(data1)  
z=statistics.median\_high(data1)  
print("median low for even number of element is",y)  
print("median high for even number of element is",z)

**output:**

median low for even number of element is 4

median high for even number of element is 5

import statistics  
data=[1,2,3,4,5,6,7]  
y=statistics.median\_low(data)  
z=statistics.median\_high(data)  
print("median low for odd number of element is",y)  
print("median high for odd number of element is",z)

**output:**

median low for odd number of element is 4

median high for odd number of element is 4

**mode():**

import statistics  
data=[1,2,3,4,2,1,1,3,4,1,2,1,5,6]  
data1=[1,1,1,2,3,3,3]  
y=statistics.mode(data)  
z=statistics.multimode(data1)  
print("mode is",y)  
print("multimode is",z)

**output:**

mode is 1

multimode is [1, 3]

**variance():**

import statistics  
data=[1,2,3,4,5,6,7]  
x=statistics.variance(data)  
print("variance is",x)

**output:**

variance is 4.666666666666667

**pvariance():**

import statistics  
data=[1,2,3,4,5,6,7,8]  
x=statistics.pvariance(data)  
y=statistics.pvariance(data,mu=4)  
print("pvariance is",x)  
print("pvariance is with mu",y)

**output:**

pvariance is 5.25

pvariance is with mu 5.5

**standard deviation:**

import statistics  
data=[1,2,3,4,5,6,7,8]  
x=statistics.stdev(data)  
print("standard deviation is",x)

**output:**

standard deviation is 2.449489742783178

**pstandard deviation:**

import statistics  
data=[1,2,3,4,5,6,7,8]  
x=statistics.pstdev(data)  
y=statistics.pstdev(data,mu=3)  
print("population standard deviation is",x)  
print("population standard deviation with mu is",y)

**output:**

population standard deviation is 2.29128784747792

population standard deviation with mu is 2.7386127875258306

**geometric mean:**

import statistics  
x = [1, 2, 3, 4, 5, 6, 7, 8, 9]  
m=statistics.geometric\_mean(x)  
n=statistics.mean(x)  
print("geometric mean is",m)  
print("mean is",n)

**output:**

geometric mean is 4.147166274396913

mean is 5

**harmonic mean:**

import statistics  
x = [1, 2, 3, 4, 5, 6, 7, 8, 9]  
n=statistics.harmonic\_mean(x)  
print("harmonic mean is",n)

**output:**

harmonic mean is 3.1813718614111375