Sample Distribution

Normal Distribution

```
n = NormalDistribution[0.5, 0.1]
NormalDistribution[0.5, 0.1]

Plot[PDF[n, x], {x, 0, 1}]

4

2

1

NormalDistribution[0.5, 0.1]
```

Population

```
Population = Table[RandomVariate[n], {i, 1, 1000}];
Mean[Population]
0.504084
Variance[Population]
0.0098354
```

Sample

```
Sample = Table[Mean[Table[RandomVariate[n], {i, 1, 1000}]], {i, 1, 100}];
Mean[Sample]
0.499899
```

Variance[Sample]

 9.61351×10^{-6}

0.01/1000

0.00001