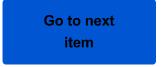
Congratulations! You passed!

Grade received 100%

To pass 100% or higher



Generating Random Data and Samples

Latest Submission Grade 100%

1. In the code block below, generate 3 normal random variables with mean 100 and standard deviation 1.

1/1p

This will require about 4 lines of code. Use the functions provided in this outline.

- Import the *numpy* library
- Set the seed to 123 to initialize environment so random variables are replicated according to the grader. (hint: np.random.seed(?))
- Generate three random normal variables with mean 100 and standard deviation 1 and assign them to a variable named sample. (hint: sample = np.random.normal(?,?,?))
- Print the variable sample.

The **question marks** in the hints indicate input parameters.

Choose the answer that matches your result to three decimal places.

Reference Documentation

- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.random.seed.html
- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.random.normal.html

```
1  # Write your function here
2  mean = 100
3  sd = 1
4
5  import numpy as np
6  np.random.seed(123)
7  variables = np.random.normal(mean, sd, 3)
8  print("Variables : ", variables)

Reset
```

- 99.914 101.937 100.282

 99.922 100.103 100.819

 98.914 100.997 100.283

 99.822 100.093 100.719

 100.915 99.997 101.283
- **2.**Generating random samples from a population lies at the heart of statistics. In the code block below, draw a sample of size 10 from a set containing the integers 1 through 100.

1/1p

This will require about 5 lines of code. Use the functions provided in this outline.

- 1. Import the numpy library
- 2. Set the seed to 123 to initialize environment so random variables are replicated according to the grader. (hint: np.random.seed(?))
- 3. Create a vector called population, and put the numbers 1-100 into the population list. (hint: np.arange(?,?))
- 4. Generate a sample with length 10 from the population. (hint: sample = np.random.choice(?, ?)) and assign the output to a variable named sample.
- 5. Print the variable sample.

The **question marks** in the hints above indicate input parameters.

Reference Documentation

- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.random.seed.html
- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.arange.html
- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.random.choice.html

```
1
     import numpy as np
 2
     np.random.seed(123)
     #https://numpy.org/doc/stable/reference/generated/numpy.arange.html
     #up to and not including the 'stop #'
 5
     population = np.arange(1, 101)
7
     #sample size
8
     m = 10
9
     sample = np.random.choice(a = population, size = m)
                                                                               Run
10
     print("Sample :", sample)
                                                                               Reset
```

Select the answer matching your sample below.

0	-0.2144699617662135 0.4160333636063626 0.02927226924712613 -0.5072293848619751 2.6014747539872567 0.17141327084834654 -0.21195901381927462 -0.37671989689029883 0.1799644167541328 -0.8515596897956541
0	110 67 93 99 103 18 84 107 58 87
0	12 14 57 79 70 72 36 25 67 9
•	67 93 99 18 84 58 87 98 97 48
0	0.70579387 -0.69160146 1.12461493 0.36499493 0.19864388 -0.85155969 -2.88011494 -0.77227959 0.36499493 0.809468
0	9 25 68 88 80 49 11 95 53 99
(v	Correct