Congratulations! You passed!
TO PASS 100% or higher

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GRADE
100%

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 / 1 point**

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: np.random.normal(**?,?,?**)*)
- Print the variable sample.

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

Round the values to the 1000th decimal place and select the matching answer below.

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
- https://docs.scipy.org/doc/numpy-1.15.1/reference/generated/numpy.around.html

```
# Write your function here
import random
random.seed(123)
a = [random.normalvariate(100, 1) for _ in range(3)]
print(a)
```

Run
Reset

- (●) 98.914 100.997 100.283
- ( ) 98.91436939669944 100.99734544658358 100.28297849805199
- ( ) 98.9143694 100.99734545 100.2829785
- ( ) 99.822 100.093 100.719
- ( ) 99.82166382134889 100.09299998647415 100.71877584655846

Correct

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 / 1 point**

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: 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

```
import numpy as np
np.random.seed(123)
population = np.arange(1,101)
sample = np.random.choice(population,10)
print(sample)
```

Run
Reset

Select the answer matching your sample below.

- (●) 67 93 99 18 84 58 87 98 97 48

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

✓ **Correct**