

Distribution function and randomCourse > Week 2 > number

> Problem (3-4)

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Problem 3

0.0/1.0 point (graded)

Which of the following codes (C1, C2, C3, C4) correctly draws 10,000 random numbers from a normal distribution with mean $\langle X \rangle = 2$ and variance $\langle X^2 \rangle - \langle X \rangle^2 = 4$?

```
# C1
import numpy as np
ave = 2.0
std = np.sqrt(4.0)
N = 10000
np.random.seed(1000)
X = np.random.normal(ave,std,N)
```

```
# C2
import numpy as np
ave = 2.0
std = 4.0
N = 10000
np.random.seed(0)
X = np.random.normal(ave,std,N)
```

```
# C3
import numpy as np
ave = 2.0
std = 4.0**2
N = 10000
np.random.seed(0)
X = np.random.normal(ave,std,N)
```

```
# C4
import numpy as np
ave = 2.0
std = 4.0
N = 10**4
np.random.seed(1000)
X = ave+std*np.random.randn(N)
```

☐ C1 only☐ C2 only☐ C3 only☐ C4 only☐ C1 and C3 only☐ C2 and C4 only☐ C2 and C3 only☐ C2, C3, and C4 only☐ C1, C2, and C4 only☐ C1, C2, C3, and C4

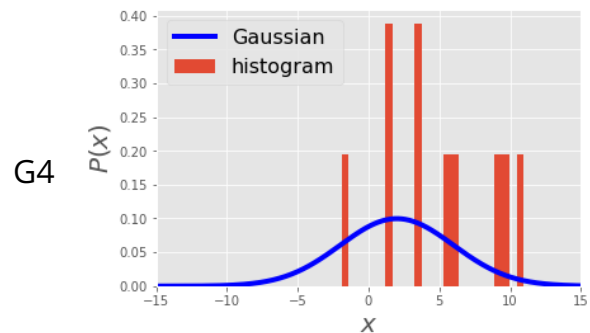
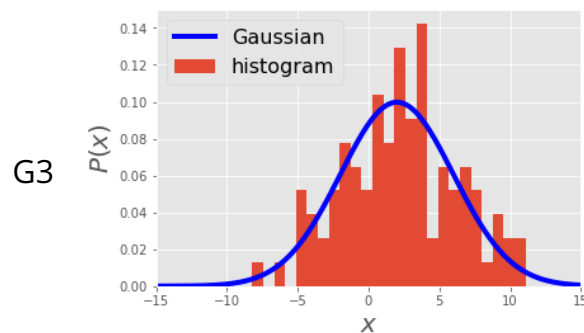
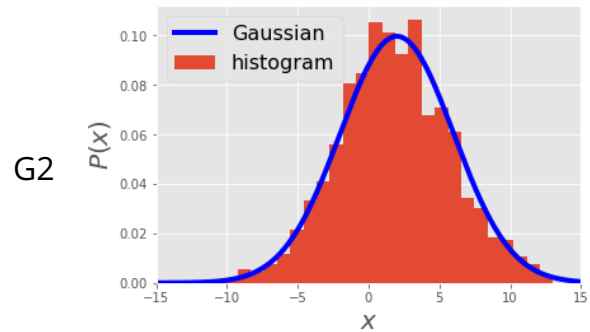
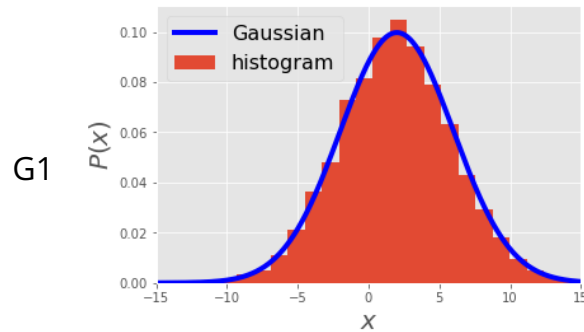
You have used 0 of 2 attempts

Problem 4

0.0/1.0 point (graded)

The red bars in the following graphs represent the histograms of $N=10, 100,$

1,000, and 10,000 random numbers drawn from a normal distribution with $\langle X \rangle = 2$ and $\sigma = 4$, plotted in blue. Choose the correct graph for the histogram corresponding to $N=1,000$ random numbers from the following graphs (G1 - G4).

☐ G1☐ G2☐ G3☐ G4

You have used 0 of 2 attempts

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