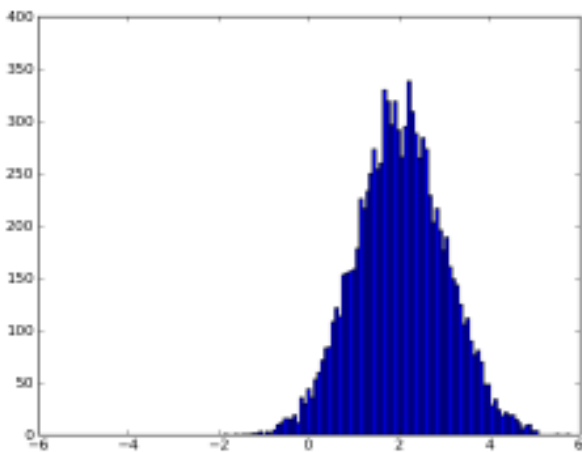


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## L6 PROBLEM 2-1 (1/1 point)

For all the images in this problem, click on the image to view it full-sized. This way you'll be able to see the X and Y axes more clearly.

Samples were taken from a distribution, and the histogram of those samples is shown here:



Which of the following distributions were the samples taken from?

- ☐ Uniform Distribution
- ☐ Exponential Distribution
- ☒ Normal Distribution ✓

**EXPLANATION:**

This is a normal (aka Gaussian) distribution.

[Check](#)[Hide Answer](#)

## L6 PROBLEM 2-2 (1/1 point)

Which of the following histograms best matches samples taken from a uniform distribution between 0 and 2?

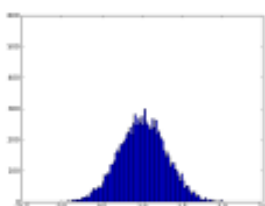


Figure 1

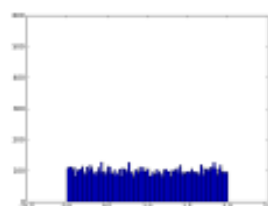


Figure 2

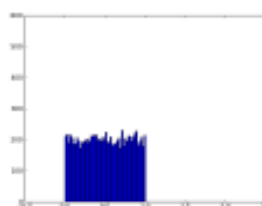


Figure 3

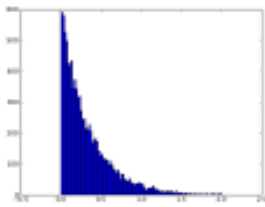


Figure 4

- ☐ Figure 1
- ☒ Figure 2 ✓
- ☐ Figure 3
- ☐ Figure 4

Check

Hide Answer

### L6 PROBLEM 2-3 (1/1 point)

Each of the following histograms was generated by sampling a different normal distribution. Which histogram best matches the normal distribution with the highest variance of the three?

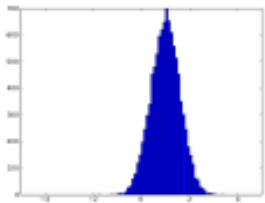


Figure 1

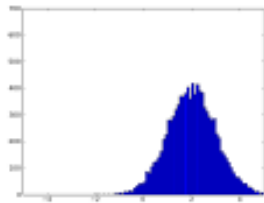


Figure 2

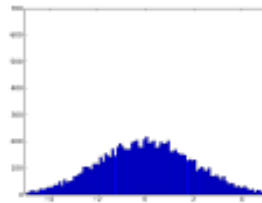


Figure 3

- ☐ Figure 1
- ☐ Figure 2
- ☒ Figure 3 ✓

Check

Hide Answer

### L6 PROBLEM 2-4 (1/1 point)

Mary's Clothes Shoppe is a moderately busy store. Which of the following histograms best matches observations of how much time (in minutes) there is between customer arrivals? That is, which histogram helps best predict how much time until the next customer comes into the Clothes Shoppe.

For each histogram, 1000 observations were made. The x-axis is measured in minutes, and the height of each bar at minute  $m$  corresponds to how many times there was an  $m$  minute wait until the next customer arrived.

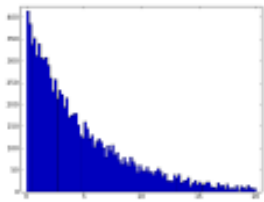


Figure 1

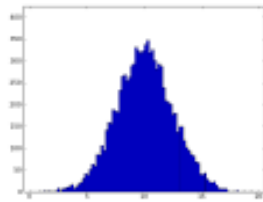


Figure 2

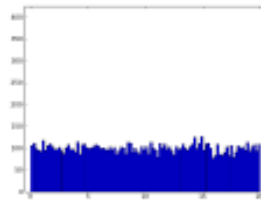



Figure 3

- ☒ Figure 1 
- ☐ Figure 2
- ☐ Figure 3

Help

#### EXPLANATION:

The best match is Figure 1. It is common for a busy store to have frequent customers and it is most common that the next customer arrives shortly after the previous customer. It is rare - but not impossible - for there to be a 15+ minute gap between one customer and the next; but typically we see 1-5 minute gaps.

Generally, inter-arrival time problems are modeled well by exponential distributions.

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