Ma321 Normal Curves In Class Assignment

For problems 1-6 below, draw the graphs for the problem. Label each as one of these types as well:

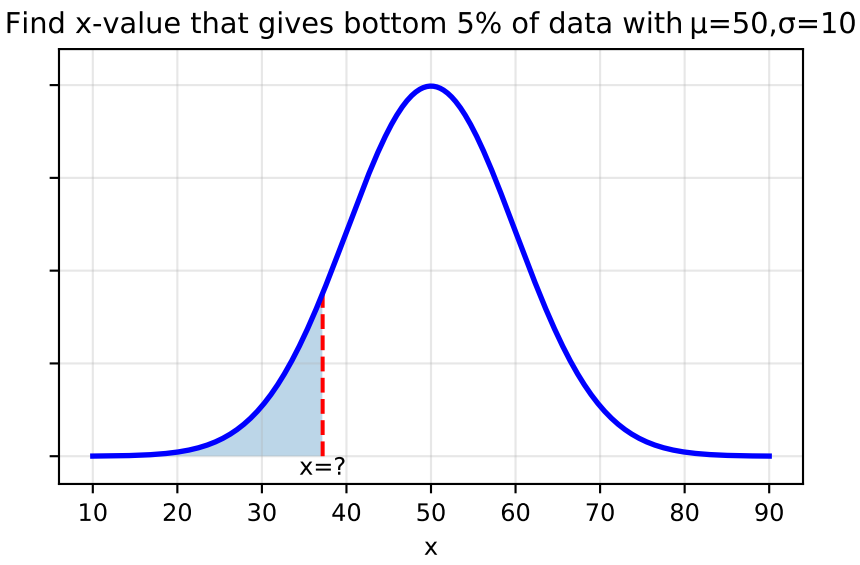
- Left Tail Area x-distribution
- Left Tail Area z-distribution
- Right Tail Area x-distribution
- Right Tail Area z-distribution
- Backwards Right Tail Area
- Backwards Left Tail Area

Questions

1. If the mean is 50 and the standard deviation is 10, what x-value corresponds to the bottom 5% of the data?

Solution

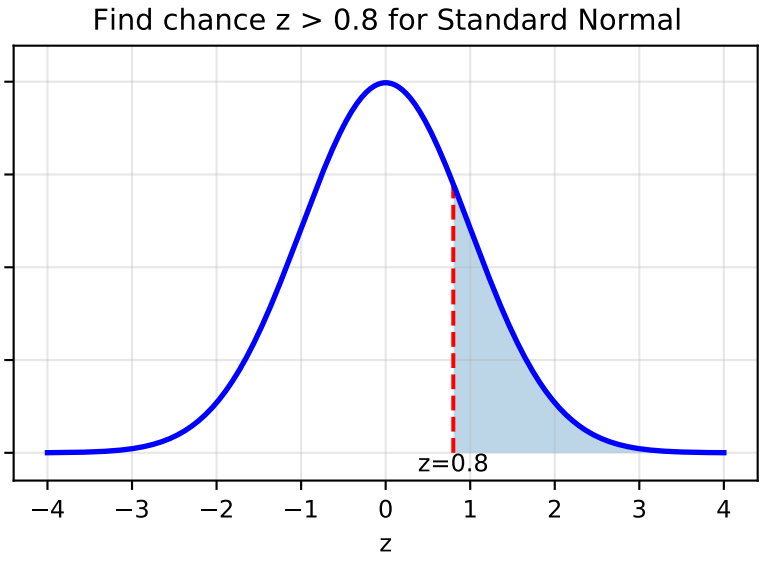
Backwards Left Tail Area



2. For a standard normal curve, what is the chance that z>0.8?

Solution

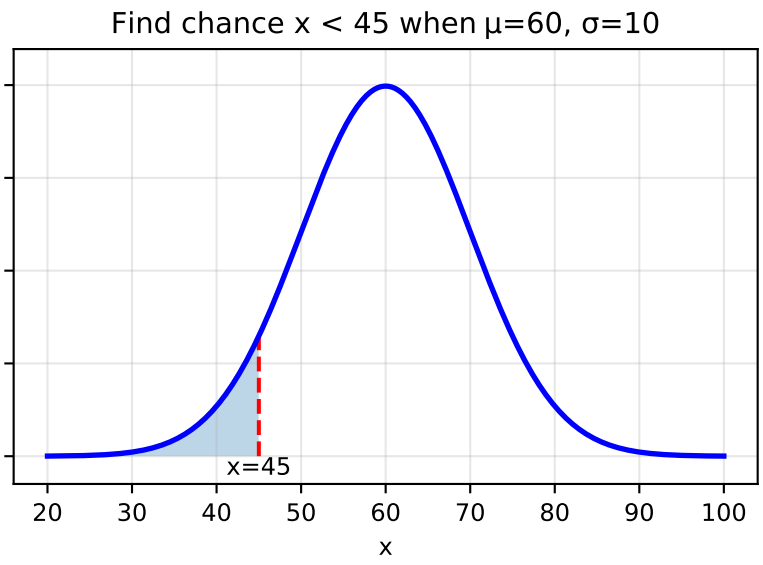
Right Tail Area z-distribution



3. For a normal demand curve with a mean of 60 and a standard deviation of 10, what is the chance that demand is less than 45?

Solution

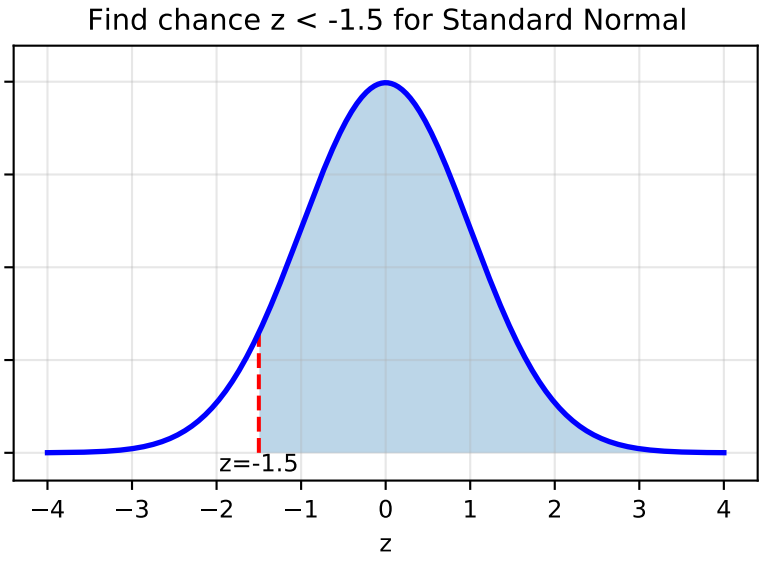
Left Tail Area x-distribution



4. For a standard normal curve, what is the chance that z is less than -1.5?

Solution

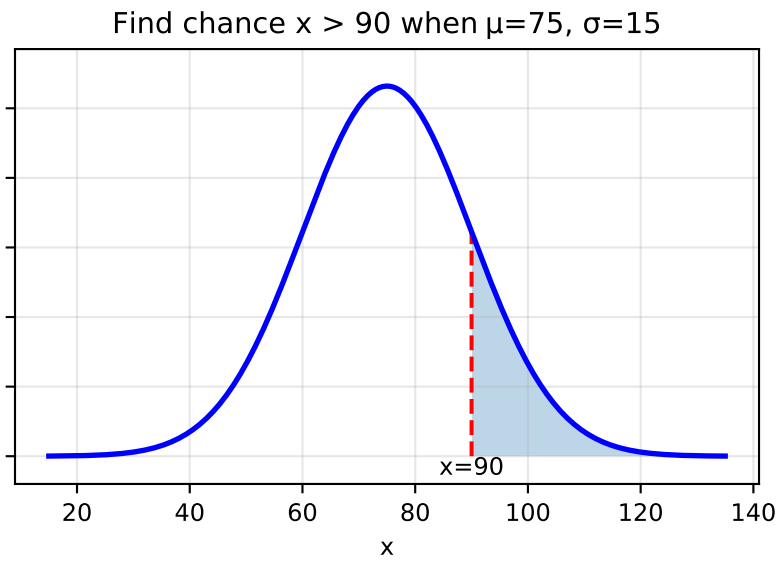
Left Tail Area z-distribution



5. For a normal demand curve with a mean of 75 and a standard deviation of 15, what is the chance that demand is greater than 90?

Solution

Right Tail Area x-distribution



6. If the mean is 70 and the standard deviation is 15, find the top 1% of the data.

Solution

Backwards Right Tail Area