Lab 5: Continuous Distributions

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due 11/6 at end of discussion

Exponential Distribution

The amount of time (in hours) a person spends waiting in a line at the DMV, X, follows and exponential distribution with rate 0.5.

Q1: What is the expected wait time of this person?

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#Code
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Q2: What is the probability that the person waits between 1.5 and 2.5 hours?

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#Code
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Continuous Uniform Distribution

In the next 94 minutes an alarm will go off randomly.

Q3: What is the probability that the alarm goes off in the first 15 minutes?

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#Code
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Q4: what is the probability that the alarm goes off in the last 20 minutes?

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#Code
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Normal Distribution:

The weights of female giraffes is believed to follow a normal distribution with a mean of 1815 pounds and standard deviation of 100 pounds.

Q5: What is the z-score of a randomly selected female giraffe the weighs 1600 pounds?

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#Code
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Q6: What is the probability that a randomly selected female giraffe is between 1740 lbs. and 2100 lbs.?

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#Code
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Q7: What is the probability that a randomly selected giraffes weights over 1810 lbs.?

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#Code
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Q8: What is the third quartile of female giraffe weights?

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#Code
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Q9: Fill in the blank: The top 10% heaviest female giraffes weigh more than _____ pounds.

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#Code
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