**Homework 2**

**Question 1**

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Chart, histogram

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**How to calculate C for Question 2 and Question 3**

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**Question 2**

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Chart, histogram

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**Question 3**

**Text

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**Question 4**

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**#** how would you sample from the distribution that has density f ?

1, find CDF and inverse/pseudo CDF

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2, Sample X’ from Inverse CDF, by plugging in uniform samples(unif[0,1]) in the inverse CDF to generate samples with density f.

Graphical user interface, text, application, email

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**#** In your algorithm, on average how many samples from f were you rejecting for every accepted sample? Is this what you were expecting?

On average 0.72 samples are rejected for every accepted sample. This is what I am expecting by taking the ratio of the probability of rejecting and accepting.

This make sense because my M = 1.5 so it is relatively small.

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**Chart, scatter chart

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This QQ plot shows an identity relationship between sample generated through rejection algorithm and the box muller method.

This means those two samples comes from the same distribution and they are normally distributed.

**Question 5**

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Chart, scatter chart

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