EE3060 Probability – Proposed questions and answers

Question 1:

A point Y is randomly selected from [0,2], and the other point X is randomly selected from [0,Y].

Find the probability density function of X.

Answer 1:





Question 2:

Given ,

1. Find
2. Find ,
3. Find CDF of

Answer 2:

1. For x<1

For 2>x>=1

For x>=2

CDE =

Question 3:

Let Y=sin(X), where X is uniformly distributed in the interval (0,2π)

Find the pdf of Y

Answer 3:



Question 4:

Let X be a random number from (0,1). Find the probability density fuction of Y=1/X

Answer 4:



Question 5:

Q:The temperature at NTHU city is modeled as normal random variable with mean and standard deviation both equal to 30C(Celsius).

A delicate bomb is designed to boom at 113F(Fahrenheit).What is the probability that the bomb explode at a randomly chosen time?

Answer 5:



