ECE 341 - Homework #5

Geometric, Pascal Distributions

Let

- A be the number of times you roll a 10-sided die until you roll a 1 (p = 1/10)
- B be the number of times you roll a 10-sided die until you get a 1, or 2 (p = 1/5)

1) Determine the pdf of A+B using convolution

2) Determine the pdf of A+B using z-transforms

Let

- A be the number of times you roll a 6-sided die until you roll a 1 (p = 1/6)
- B be the number of times you roll a 8-sided die until you get a 1 (p = 1/8)
- C be the number of times you roll a 10-sided die until you get a 1 (p = 1/10)
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3) Determine the pdf of A+B+C using convolution

4) Determine the pdf of A+B+C using z-transforms