ELEG 3143 Assignment # 4

1. A pair of dice are tossed 10 times. Find the probability that a sum of 6 will occur exactly 4 times.

2. A basketball player has a 80% free throw success rates. During a game the player had 8 free throw attempts.

   (a) What is the probability that all attempts are successful?

   (b) What is the probability that at lest 6 attempts are successful?

3. Two men each flip a coin three times.

   (a) What is the probability that both men will get exactly two heads each?

   (b) What is the probability that one man will get no head and the other man will get three heads?

4. An urn contains 5 red, 3 orange, and 2 blue balls. Two balls are randomly selected simultaneously.

   (a) What is the sample space?

   (b) Define an RV X as the number of orange balls selected. Show the map from the sample space to X.

   (c) Find the PMF of X.

   (d) Find the CDF of X.

5. Suppose a coin having probability 0.7 of coming up heads is tossed 3 times. Let X denote the number of heads that appear in the 3 tosses. Find the PMF of X.