Suppose you play against another player in the game in which each player

rolls a die and the higher face values wins the game.

Answer the following questions.

1. Describe the sample space S for this game.

2. Express the event of winning as a subset of sample space.

3. What are your chances of winning? In the answer provide with the properties you have used in your argument.

4. What are your chances of losing? Explain the answer.

5. What are chances of a tie? Explain the answer.

6. Let X be the number that your die turns up and Y be the number of your

competitor.

Describe the events of winning, losing, tying a game in the terms of random variables X and Y .

7. Find the probability mass function (pmf) of X.





