Kerry Ojakian's MTH 23.5 Class
Class Assignment #10

1. Suppose someone rolls a 10-sided die with sides labeled by the integers from 10 to 19.

   (a) Write down the sample space.

   (b) Let A be the event of rolling an even number. Write down the event in set notation. What is the probability of A?

   (c) Let X be the event of rolling an number less than 14. Write down the event in set notation. What is the probability of X?

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2. Suppose a dealer draws a single card from a standard deck of cards.

   (a) What is the size of the sample space?

   (b) Let E be the event of drawing a 5 or 7 of any suit. Write down the event in set notation. What is the probability of E?

   (c) What is the probability of drawing a heart whose value is between 5 and 10, *inclusive*?

   (d) What is the probability of drawing a heart whose value is between 5 and 10, *exclusive*?

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3. Suppose we have two 3-sided dice, where for each die its sides are labelled by A, B, C.

   (a) Write down the sample space in set notation.

   (b) Let X be the event of having both dice having the same value. Write down the event in set notation. What is the probability of X?

   (c) Let Y be the event of having both dice being consonants. Write down the event in set notation. What is the probability of Y?

Suppose you roll one 6-sided dice.

4. What is the probability the roll is odd?

5. What is the probability the roll is odd **and** larger than 2?

6. What is the probability the roll is odd **or** larger than 2?

Suppose you roll two 6-sided dice.

7. What is the probability that their sum is 4?

8. What is the probability that their sum is 11?

9. What is the probability that their sum is 4 or 11?

10. What is the probability that their sum is 10 or larger?

11. What is the probability that their sum is less than 2?