

3/19/19

5.5.39 Garage Door Code

Outside a home there is a keypad that will open the garage with the correct 5-digit code.

- (a) How many codes are possible?
- (b) What is the probability of entering the correct code on the first try, assuming that the owner doesn't remember the code?
- (c) If the owner suddenly remembers the last two digits ($x - x - x - 2 - 3$) and that no numbers repeat, what is the probability of entering the correct code on the next try?

Date - 3/19/19
Math 1342-13
Mr. Aguirre

$$① 7! = 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$$

$$6! = 6 \times 5 \times 4 \times 3 \times 2 \times 1$$

When order matters, it is Permutation.

When order does not matter, then it is Combination.

Permutation: $nPr = \frac{n!}{(n-r)!}$

Combination: $nCr = \frac{n!}{r!(n-r)!}$

3/21/19

6.1.19 Ichiro's Hit Parade

In the 2004 baseball season, Ichiro Suzuki of the Seattle Mariners set the record for most hits in a season with a total of 262 hits.

In the following probability distribution, the random variable X represents the number of hits Ichiro obtained in a game.

x	$P(X)$
0	0.1677
1	0.3354
2	0.2857
3	0.1491
4	0.0373
5	0.0248

- Verify that this is a discrete probability distribution.
- Draw a graph of the probability distribution. Describe the shape.
- Compute and interpret the mean of the random variable X .
- Compute the standard deviation of the random variable X .
- What is the probability that in a randomly selected game Ichiro got 2 hits?
- What is the probability that in a randomly selected game Ichiro got more than 1 hit?