
1. Here is some sample data consisting of homework scores:
   
   29, 26, 25, 21, 24, 25
   
   What is the mean, mode, median, midrange, range, and standard deviation of this data?

2. In a sample of 80 people from a local theatre, 54 people like Cherry Icees and 21 people like Blueberry Icees. If 7 of these people like both Cherry and Blueberry Icees, what is the probability that a polled person likes Cherry and/or Blueberry Icees?

3. What is the probability of choosing a Social Security number that begins with an even number and ends in a ‘7’?

4. At my home recently, there were 4 epics in a stack of 6 unwatched movies.
   
   (a) If my brother Shaun randomly picks 3 of them, what is the probability that they are all epics?
   
   (b) In order to watch a movie in each of the next 3 days, Shaun will let his multi-disk DVD player make a random selection each night. Assuming that all 6 disks are in the player, what is the probability all of them chosen are epics?

5. Suppose that we have a total of 30 California poppy plants, with 21 of them being orange, 5 being white, and 4 being red. An unexpected freeze hits the area, and only 2 orange, 1 white, and 2 red poppy plants survive the freeze.
   
   (a) Draw a table (it may help!).
   
   (b) What is the probability that a randomly picked poppy plant survived the freeze?
   
   (c) What is the probability that a randomly picked poppy plant survived the freeze, provided it is a red one?

6. From a selection of 58 marbles with 15 of them having a swirly pattern:
   
   (a) How many ways can I pick a sequence of 10 marbles?
   
   (b) How many ways can I pick a group of 10 marbles?
   
   (c) What is the probability that in my selection of 10 marbles, 9 of them are swirly?

7. How many ways can you arrange the letters in the word “MASSACHUSETTS”?

8. Suppose that 99% of the plush, cuddly, furry brown teddy bears from a toy factory are free of defects. In a batch of 50 teddy bears:
   
   (a) Find the mean and standard deviation of the binomial distribution associated to this batch of 50 teddy bears.
   
   (b) What is the probability that 10 of them have defects?
   
   (c) What is the probability that at least 1 of them has a defect?