

13. A bowl contains 16 chips, of which six are Doritos, seven are Ruffles, and three are Fritos. Jane likes Doritos, Ruffles are her favorite, and she does not like Fritos. If four chips are taken at random and without replacement (because replacement would be gross and rude), find the following.
- (a) Describe the sample space. Specifically, what is the job? What is the task? What does an outcome in the sample space "look like"? Are repeats allowed? Are outcomes ordered or unordered?
 - (b) Find the probability that all four chips are Ruffles.
 - (c) Find the probability that none of the four chips are Ruffles.
 - (d) Find the probability that there is at least one chip of each brand. (Hint: Use DeMorgan's Laws).