



## 2. Rejection Sampling

Explain how the two steps of rejection sampling are analogous to applying the definition of conditional probability.

## 3. Hockey Fights

You meet 10 die-hard Canadian ice hockey fans and politely interrupt their discussion about who the best team in the National Hockey League is. Each fan independently roots for exactly one of the following three teams: Toronto Maple Leafs, Edmonton Oilers, Montreal Canadiens. A fan is equally likely to root for any of these teams.

(a) What is the probability 5 of them are Leafs fans, 3 are Oilers fans and 2 are Canadiens fans?

(b) What is the probability each team has at least one fan?

(c) What is the expected number of distinct teams being rooted for among the 10 fans?

(d) **(Optional)** What is the probability one team has strictly more fans than the other two teams?