**Part IV: Chapter 4: Relative Frequency Probability Estimates**

**Task 1: You will need to manipulate the data and construct some contingency tables in order to find the probabilities for Task 2. There is a prepared handout on this topic which can be obtained from your instructor.**

|  |  |  |
| --- | --- | --- |
|  | **Lieutenant candidate** | **Captain candidate** |
| **White** |  |  |
| **Black** |  |  |
| **Hispanic** |  |  |

**Task 2: Use the contingency table to estimate the following probabilities.**

* **What is the probability of selecting a black candidate if you choose one name at random from the data?**

**P(black candidate) =**

* **What is the probability of selecting a captain candidate if you choose one name at random from the data?**

**P(captain candidate) =**

* **What is the probability of selecting a Hispanic lieutenant candidate if you choose one name at random from the data?**

**P(Hispanic lieutenant candidate) =**

* **What is the probability of selecting a lieutenant candidate or a white candidate?**

**P(lieutenant OR white) =**

* **If you selected 2 participants without replacement what is the probability of selecting 2 consecutive white candidates?**

**P(white and then white) =**