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

**Task 1: Manipulate the data and construct a contingency table of gender versus smoking status. Fill in the blank table given below. There is a prepared handout on this topic which can be obtained from your instructor.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | **Gender** | |
| **Female** | **Male** |
| **Smoking Status** | **Smoker** |  |  |
| **Nonsmoker** |  |  |

**Task 2: Use the table to estimate the following probabilities. Follow all of your instructor’s directions regarding format of answers and work to be shown.**

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

**P(female) =**

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

**P(smoker) =**

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

**P(female smoker) =**

* **What is the probability of selecting a female or a nonsmoker?**

**P(female OR nonsmoker) =**

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

**P(female and then female) =**