- 1. The Sith Lords are concerned that their recruiting slogan, "Give In to Your Anger," isn't very effective. Darth Vader develops an alternative slogan, "Together We Can Rule the Galaxy." They compare the slogans on two groups of 50 captured droids each. In one group, Emperor Palpatine delivers the "Anger" slogan. In the other, Darth Vader presents the "Together" slogan. 20 droids convert to the Dark Side after hearing Palpatine's slogan, while only 5 droids convert after hearing Vader's. The Sith's data scientist concludes that "Anger" is a more effective slogan and should continue to be used.
- 2. In the past, the Jedi have had difficulty with public relations. They send two envoys, Jar Jar Binks and Mace Windu, to four friendly and four unfriendly planets respectively, with the goal of promoting favorable feelings toward the Jedi. Upon their return, the envoys learn that Jar Jar was much more effective than Windu: Over 75% of the people surveyed said their attitudes had become more favorable after speaking with Jar Jar, while only 65% said their attitudes had become more favorable after speaking with

- Windu. This makes Windu angry, because he is sure that he had a better success rate than Jar Jar on every planet. The Jedi choose Jar Jar to be their representative in the future.
- 3. A company with work sites in five different countries has sent you data on employee satisfaction rates for workers in Human Resources and workers in Information Technology. Most HR workers are concentrated in three of the countries, while IT workers are equally distributed across worksites. The company requests a report on satisfaction for each job type. You calculate average job satisfaction for HR and for IT and present the report.
- 4. When people install the Happy Days Fitness Tracker app, they are asked to "opt in" to a data collection scheme where their level of physical activity data is automatically sent to the company for product research purposes. During your interview with the company, they tell you that the app is very effective because after installing the app, the data show that people's activity levels rise steadily.
- 5. To prevent cheating, a teacher writes three versions of a test. She stacks the three versions together, first all copies

of Version A, then all copies of Version B, then all copies of Version C. As students arrive for the exam, each student takes a test. When grading the test, the teacher finds that students who took Version B scored higher than students who took either Version A or Version C. She concludes from this that Version B is easier, and discards it.

- 1. The entirety of the population are captured droids. When palpatine speaks to them they may fear that he'll give into his anger and kill them if they don't join. The "Together" pitch is a hard sell to people being held against their will, especially coming from Darth Vader himself. They should try the test on those who aren't captured.
- 2. The planets populations may be vastly different. Jar Jar could've converted 75% of 10000 people whereas Mace Windu converted 65% of 3 million. It's also worth noting that Jar Jar was sent to friendly planets and Windu to a much harder unfriendly zone. One thing they could fix is to send them both to two friendly and two unfriendly planets. Also to try and send them to planets of close population.
- 3. The Averages for the HR department won't accurately reflect each site because most are concentrated in 3 of the 5 countries. To fix it you could do the average of those at each site. That way the sites are accurately represented
- 4. The activity levels may rise without use of the app. There's only one sample which is the entirety of the population.
- 5. The tests aren't stacked in a random order. If a large group that normally sits together arrives at the same time they would receive the same test and be able to cheat. To fix randomly stack the tests that way you can almost guarantee that people sitting next to each other don't have the same test.