

1.
 - a. Convenience sample, voluntary response sample
 - b. Undercoverage bias, nonresponse bias, response bias, and question wording bias.
2.
 - a. Undercoverage bias. Millennials who don't shop at Whole Fruits are not being included in the process of selecting the sample.
 - b. No. Because millennials that shop at Whole Fruits are more likely to pay more for high-quality foods than millennials who don't shop at Whole Fruits, the 70% claim is likely higher than the true percent for all millennials.
3.
 - a. Nonresponse bias. Of the 100 teachers selected to be the sample, 44 did not respond. It is not voluntary response because there was an intentional sample of 100 teachers, not an open invitation to all teachers.
 - b. Greater than. The teachers that didn't respond to the survey were more likely to be too busy, possibly because they have less time for planning each day than those teachers who did have the time to respond.
 - c. No, increasing the sample size will not reduce the bias. While there will be more teachers that respond if the sample size is larger, the teachers that do respond are still going to be systematically different (have more time) than those teachers who do not respond.
4. Question wording bias – the survey includes additional information that is leading. Response bias – users might lie and rate their experience higher than the truth because they don't want to disappoint the company.
5.
 - a. Response bias. Because students are self-reporting their practice times, they may not be truthful.
 - b. Greater than. Students might want to impress the teacher or earn a high grade in the class, so they would report practice times that are longer than the actual amount of time they did practice.
 - c. The teacher could require that students audio record their practice sessions and submit the recordings rather than a self-reported practice log.
6. B
7. C