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Quiz 2 Extra Practice

11.10.23

1.) Some call the Ford School the “Food School” because of how many events include free food. To measure whether the Ford School has the same amount of food as other programs, experts count how many events a month at the Ford School include free food, compared to the law school. Suppose that, across a sample of Ford events, the mean of this variable is 8.2 (n=81; s=2.9), and in a sample of law events the mean is 7.1 (n=61; s=2.9). Conduct a test of statistical significance vs. the null hypothesis that the true difference of means is 0. Show your work and perform all the steps.

2.) You have two samples of how many squirrels were spotted in the Arb over the course of a day. The first sample, taken in Summer/Fall 2022, includes 250 days, the mean number of squirrels per day was 170, with a standard deviation of 20. You have a second sample of 20 days taken in Summer/Fall 2023 where the mean number of squirrels was 180, with a standard deviation of 25. Perform a significance test for the difference of means and show all your steps.

3.) You have a sample of how many minutes a week 41 Ford students spent watching the tv show “Love Is Blind”. In Fall 2022, the mean number of minutes was 170. In Fall 2023, the mean number of minutes was 175. The standard deviation of the difference is 3. Perform a significance test that the difference of means is 0 and show all your steps.