1. How do you control for biases?
Use randomization, blinding, and representative samples to mitigate biases in research or experiments.

2. What are confounding variables?
Confounding variables are variables that influence both dependent and independent variables., ultimately covering up the true relationship between important variables.

3. What is A/B testing?
A/B testing is when a method is used to compare 2 versions of a single variable, used to see the response to multiple variables and see which is more effective.

4. When will you use the Welch t-test?
Used when comparing means of independent groups with unequal variances or sample sizes.

5. A company claims that the average time its customer service representatives spend on the phone per call is 6 minutes. You believe that the average time is actually higher. You collect a random sample of 50 calls and find that the average time spent on the phone per call in your sample is 6.5 minutes, with a standard deviation of 1.2 minutes. Test whether there is sufficient evidence to support your claim at a significance level of 0.05.

6. A researcher wants to determine whether there is a difference in the mean scores of two groups of students on a math test. Group A consists of 25 students who received traditional teaching methods, while Group B consists of 30 students who received a new teaching method. The average score for Group A is 75, with a standard deviation of 8, and the average score for Group B is 78, with a standard deviation of 7. Test whether there is a significant difference in the mean scores of the two groups at a significance level of 0.05.