Description of `week12data.csv`:

Howell and Huessy (1985) reported on a study of children who had (and had not) exhibited symptoms of attention deficit disorder (ADD) during childhood. In 1965, teachers of all second-grade school children in a number of schools in northwestern Vermont were asked to complete a questionnaire for each of their students dealing with behaviors commonly associated with ADD. Questionnaires on these same children were again completed when the children were in the fourth and fifth grades and, for purposes of this data set only, those three scores were averaged to produce a score labeled `ADDSC`. The higher this score, the more ADD-like behaviors the child exhibited. At the end of ninth grade and again at the end of twelfth grade, information on the performances of these children were obtained from school records. These data offer the opportunity to examine questions about whether later behavior can be predicted from earlier behavior and to examine academically related variables and their interrelationships. A description of each variable follows:

`ADDSC`	Average of the three ADD-like behavior scores obtained in elementary school
`GENDER`	1 = male, 2 = female
`REPEAT`	1 = repeated at least one grade; 0 = did not repeat a grade
`IQ`	IQ obtained from a group-administered IQ test
`ENGL`	Level of English in ninth grade: 1 = college prep; 2 = general; 3 = remedial
`ENGG`	Grade in English in ninth grade: 4 = A, 3 = B, etc.
`GPA`	Grade point average in ninth grade
`SOCPROB`	Social problems in ninth grade: 1 = yes; 0 = no
`DROPOUT`	1 = dropped out before completing high school; 0 = did not drop out

Research question: *Do ADD-like behaviors differ between males and females?*

- Identify the test that you are using.

- Write down specific definitions for the null hypothesis $\mathcal{H}_0$ and the alternative hypothesis $\mathcal{H}_1$. Be sure to include definitions for your parameters (i.e., $\mu_1, \mu_2, \ldots$).

- Report the appropriate test statistic and the p-value. What does this p-value tell you?

- What is your answer to the research question?

Research question: *Do children who repeated at least one grade exhibit more ADD-like symptoms than children who did not repeat a grade?*

- Identify the test that you are using.

- Write down specific definitions for the null hypothesis $\mathcal{H}_0$ and the alternative hypothesis $\mathcal{H}_1$. Be sure to include definitions for your parameters (i.e., $\mu_1, \mu_2, \ldots$).

- Report the appropriate test statistic and the p-value. What does this p-value tell you?

- What is your answer to the research question?

Research question: *Are there significant differences in ADD-like behaviors among children with different levels of English in ninth grade?*

- Identify the test that you are using.

- Write down specific definitions for the null hypothesis $\mathcal{H}_0$ and the alternative hypothesis $\mathcal{H}_1$. Be sure to include definitions for your parameters (i.e., $\mu_1, \mu_2, \ldots$).

- Report the appropriate test statistic and the p-value. What does this p-value tell you?

- What is your answer to the research question?

Research question: *Do children with social problems exhibit a lower IQ than children without social problems?*

- Identify the test that you are using.

- Write down specific definitions for the null hypothesis $\mathcal{H}_0$ and the alternative hypothesis $\mathcal{H}_1$. Be sure to include definitions for your parameters (i.e., $\mu_1, \mu_2, \ldots$).

- Report the appropriate test statistic and the p-value. What does this p-value tell you?

- What is your answer to the research question?

Research question: *Are there significant differences in IQ among children with different levels of English in ninth grade?*

- Identify the test that you are using.

- Write down specific definitions for the null hypothesis $\mathcal{H}_0$ and the alternative hypothesis $\mathcal{H}_1$. Be sure to include definitions for your parameters (i.e., $\mu_1, \mu_2, \ldots$).

- Report the appropriate test statistic and the p-value. What does this p-value tell you?

- What is your answer to the research question?