Division III Women’s Soccer 2022 Data: Correlations

The dataset **d3\_wsoc2022.csv** contains all the game results from the 2022 Division III women’s soccer season. The various variables in the dataset include away\_team, away\_score, home\_team, home\_score and date of the game. This worksheet examines correlation and whether there is an association between the home score and the away score.

1. Before calculating the correlation value between home\_score and away\_score, do you think that the value will be positive or negative? Explain.
2. Calculate the correlation value for home\_score vs. away\_team. Interpret the correlation value in context.
3. Perform a test of association to see if the correlation value that you calculated above is statistically significant. Make sure to state the hypotheses clearly and follow the appropriate steps.
4. Plot home\_score vs. away\_score as a scatterplot. Does there appear to be a relationship between the two variables? If so, describe it. If not, explain the problem.