Guiding questions:

1. Keeping everything else the same, play around with increasing and decreasing the number of observations. What is the general trend that for the p-value when the number of observations increases? **Decreases**
2. Keeping everything else the same, play around with the slopes (2nd slider bar) and error amounts (3rd slider bar). Note what happens to the significance of the association as you change these terms. **Higher effect estimate = more significant. Greater error amounts = less significant**
3. Set the sliders as follows:
   1. 1st slider: 50
   2. 2nd slider: 1
   3. 3rd slider: 10
4. Check the box to add “teacher” as a confounding variable.
5. Color by teacher to see how the data is confounded.
6. Check and uncheck the confounding variable box a couple of times, observing what happens to the p-value when a confounding variable is added. **Usually, the p-value is less significant if there’s confounding**.
7. Turn off color. Without color, do you feel as though you are missing important information about this graph? **Yes**
8. Increase the average point difference between Mr. A and Mr. B’s classes. How does this affect your ability to detect a significant effect of studying hours on test scores? **Increasing the difference decreases the ability to detect a significant effect.**