

***Due Date & Time:** By the time your lab would have begun during the week of November 19<sup>th</sup> if your lab had not been cancelled.*

*Please drop off your assignment answers in your lab instructor's mailbox in Elliott Hall.*

*Labs for the next 2 weeks have been cancelled.*

**PLEASE SHOW ALL RELEVANT WORK,  
INCLUDING ALL RELEVANT FORMULAS AND SPSS OUTPUT.**

- 1. In two-sample NHST, what is a “natural pairing”? Please provide 3 examples of “natural pairings.” What are the advantages and disadvantages of using “natural pairings” when conducting a study whose results are analyzed with two-sample NHST?**
- 2. Turkey naturally contains high levels of an amino acid known as tryptophan. Some believe that the presence of these levels of tryptophan causes the high levels of drowsiness that some people report after eating a traditional Thanksgiving meal while watching the 1999 film documentary “Atatürk: Founder of Modern Turkey.” You wish to debunk this belief. Yes, you do. So, you travel the world and randomly recruit 16 pairs of monozygotic (genetically identical) twins for your study. Using a double-blind method, you then simultaneously feed one member of each twin pair turkey and the other member of each twin pair tofurkey (faux turkey made from tofu). While this gluttony ensues, you show the film documentary. Immediately after the film ends (shortly after the eating ceases), you measure the change in wakefulness of both twins. The results are as follows, where a higher score indicates more wakefulness:**

<b><u>Twin Pair</u></b>	<b><u>Turkey</u></b>	<b><u>Tofurkey</u></b>	<b><u>Twin Pair</u></b>	<b><u>Turkey</u></b>	<b><u>Tofurkey</u></b>
1	31	42	9	90	21
2	67	91	10	43	54
3	52	81	11	77	54
4	30	44	12	43	78
5	65	21	13	53	55
6	32	32	14	74	79
7	54	67	15	21	55
8	98	48	16	65	80

**What are your NHST hypotheses? Conducting NHST in SPSS and then doing hand-calculation to confirm your results, what do you conclude, and why?**

- 3. Using your SPSS data set that contains responses to the survey that you filled out on the first day of lab, please determine if males generally are taller than females. Conduct your analysis in SPSS and then by hand. Be sure to state your hypotheses up front.**



**Happy  
Thanksgiving!!!**