

**Lab 4 Ch.11 – Inferential Statistics Two Samples**

Critical Thinking; Communication Skills; Empirical/Quantitative Skills

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A researcher was tasked with determining whether the video display used by travel agents for booking airline reservations should be in color or in black and white. Market research has shown that travel agencies were primarily concerned with the speed at which reservations can be made. Therefore, the question was whether color displays allow travel agents to book reservations faster. Fifty subjects were tested with color displays ( $\bar{x} = 503$  sec,  $s = 9.3$  sec) and fifty subjects were tested with black and white displays ( $\bar{x} = 508.2$  sec,  $s = 9.0$  sec). Test if the reservations made on the color displays were significantly faster (less time) than those made on the black and white displays at a significance level of 0.05.

1. Write the null and alternative hypothesis.

2. Calculate the test statistic and the P-value. Label each accordingly.

3. Using your answer to #2, would you reject the null hypothesis? Justify your answer using a complete sentence and proper grammar. Do NOT write a conclusion.

4. Write out the final conclusion for this hypothesis test *as you would present it to the travel agency*. Use complete sentences and proper grammar.

