

PSYCHOLOGY B5

INDEPENDENT TWO-SAMPLE t -TEST (15 PTS)




Name:

1. Define the independent two-sample t -test.
2. Write the statistical hypotheses and draw the normal distribution for each of the follow hypothesis scenarios.

	Two-tailed Hypothesis	One-tailed Hypothesis	
		First condition is a higher score than the second condition.	First condition is a lower score than the second condition.
Statistical Hypotheses			
Distribution and Region of Rejection			

3. Write the steps and names of the formulas for the determining t -obtained in an independent two-sample t -test (*use the proper symbol*).

	Variance	Error	Obtained
Name:			

4. Everyone knows, the literature indicates, that  fans are kinder, nicer, and more loyal than Giant fans. Data was collected from two samples: a sample of Giant fans and a sample of  fans. The samples were measured on a “common courtesy” scale (1 = not at all courteous, 10 = completely courteous). You are to do a one tail test to determine whether or not  fans are more courteous than Giant fans, to a statistically significant level.

a. Research Question:

b. Statistical Test:

c. Hypotheses:


d. t -crit:

Tails:

Alpha:

df :

e. Variance, Error, Obtained

	Giant Fans
10	6
9.5	7
7	6
2	7
7	7
8	6
8	6
9	10
7.5	
$\sum X_1 =$	$\sum X_2 =$
$n_1 =$	$n_2 =$
$X_1 =$	$X_2 =$
$\sum X_1^2 =$	$\sum X_2^2 =$
$s_{x1}^2 =$	$s_{x2}^2 =$

f. Decision:

g. Findings:

5. You set out to examine the drinking behaviors of undergraduate college students. Each participant was asked how many alcoholic beverages they consumed during the past 7 days. You want to determine whether there is a difference in the drinking habits of males and females

a. Research Question:

b. Statistical Test:

c. Hypotheses:

d. t -crit:

Tails:

Alpha:

df :

e. Variance, Error, Obtained

- i. Sample 1 (females): $X_1 = 7.10$; $s_{x1}^2 = 2.94$; $n_1 = 23$
- ii. Sample 2 (males): $X_2 = 5.90$; $s_{x1}^2 = 1.82$; $n_2 = 19$

f. Decision:

g. Findings:

h. Square Point-Biserial Correlation Coefficient: