EDUC 227
FINAL, FALL 05

NAME: SECTION:

1. At a major restaurant, the manager collected data about the amount spent per customer for dinner for a sample of 49 customers over a 3-week period. He found that the sample mean is \$12.6 and the sample standard deviation is \$2.8

4% (a) What is the standard error of the mean?

8% (b) Construct the 95% confidence interval for the population mean

4% (c) Test the hypothesis $H_0 = 11$ against the alternative hypothesis H_1

2. A new diet program claims that participants lose on average 4 kilos. A random sample of 64 people participating in the program showed a sample mean weight loss of 3.5 kilos. The sample standard deviation was 1.2 kilos.

4% (a) Write in ***symbols and in English language*** null and alternative hypotheses appropriate for the situation described above

16% e program is true or not

3. A claim was made that male wages are higher than those of female wages. Two samples of females and males employees with 10 years experience provided the following hourly wages

Males	Females
$N_1 = 44$	$N_2 = 32$
$\bar{x}_1 = \$9.25$	$\bar{x}_2 = \$8.60$
$S_1 = \$1.00$	$S_2 = \$ .80$

4 % (a) Write in ***symbols and in English language*** null and alternative hypotheses appropriate to test the claim

4 % (b) Test equality of the variances using Levine test

8 % (d) Write the 99% confidence interval for the difference of the males and females population means

4. A survey was made to see if people in the age group 18-22 years spend as much time watching television as much they do reading. The survey of 15 individuals provided the weekly hours watching television and weekly hours of reading as follows:

Respondent	# of weekly television watching hours	# of weekly reading hours
1	10	6
2	14	16
3	16	8
4	18	10
5	15	10
6	14	8
7	10	14
8	12	14
9	4	7
10	8	8
11	16	5
12	5	10
13	8	3
14	19	10
15	11	6

4 %(a) Determine what kind of t-test is appropriate in this situation and why?

4 %(b) Write the appropriate and alternative hypotheses in ***both symbols and English language***

16

8 % (d) Construct the 95% confidence interval for the difference of the two population means