ID: 010

1. An experiment has $n_1 = 3$ plants in the treatment group and $n_2 = 6$ plants in the control group. After some time, the plants' heights (in cm) are measured, resulting in the following data:

	value1	value2	value3	value4	value5	value6
sample 1:	10.3	8.6	10.8			
sample 2:	17.1	19.7	19.8	16.6	22.2	19.2

- (a) Determine degrees of freedom.
- (b) Determine t^* for a 99% confidence interval.
- (c) Determine SE.
- (d) Determine a lower bound of the 99% confidence interval of $\mu_2 \mu_1$.
- (e) Determine an upper bound of the 99% confidence interval of $\mu_2 \mu_1$.
- (f) Determine $|t_{obs}|$ under the null hypothesis $\mu_2 \mu_1 = 0$.
- (g) Determine a lower bound of the two-tail *p*-value.
- (h) Determine an upper bound of two-tail *p*-value.
- (i) Do you reject the null hypothesis with a two-tail test using a significance level α = 0.01? (yes or no)

1.	(a)									
	(b)] .					
	(c)									
	(d)									
	(e)] .					
	(f)									
	(g)									
	(h)									
	(i)									