Name:

1. An experiment has $n_1 = 6$ 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:	14.1	11.2	12.8	15.1	13.8	14.1
sample 2:	9.8	8.1	9.8	11.2	11	10.8

(a) Determine degrees of freedom.

(b) Determine $t^\star$ 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 $\alpha = 0.01$? (yes or no)

1. (a) ☐☐☐☐☐☐ . ☐☐☐

(b) ☐☐☐☐☐☐ . ☐☐☐

(c) ☐☐☐☐☐☐ . ☐☐☐

(d) ☐☐☐☐☐☐ . ☐☐☐

(e) ☐☐☐☐☐☐ . ☐☐☐

(f) ☐☐☐☐☐☐ . ☐☐☐

(g) ☐☐☐☐☐☐ . ☐☐☐

(h) ☐☐☐☐☐☐ . ☐☐☐

(i) ☐