Name: _____

1. An experiment has n_1 = 4 plants in the treatment group and n_2 = 8 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	value7	value8
sample 1:	143	134	145	151				
sample 2:	108	109	101	110	94	81	96	96

(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 $|t_{\text{obs}}|$ 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) |