\[ t_3 = \frac{x - Mx}{\sqrt{n}} \]

\[ -t_0 < t_3 \text{ on } t_3 > t_0 \]

\[ b_1 < t_3 \rightarrow \text{Reject } H_0 \]

\[ b_3 > b_2 \]

\[ \text{Reject } H_0 \]
$H_0: \mu = 1.8$

$H_1: \mu > 1.8$

$\bar{x} = 1.8$

$\bar{x} = 1.911$

$n = 62$

$s = 1.065$

$\alpha = 0.05$

$\alpha/2 = 0.025$

$t_9 = \frac{(1.911 - 1.8)}{\frac{1.065}{\sqrt{62}}}$

$= 0.8207$

$t_{9} < t_{2}$, fail to reject $H_0$.

The claim that the mean weight of lime plastic in a household is greater than 1.8 lbs is false. The test is not significant.
$H_0: \mu = 98.6$

$H_1: \mu \neq 98.6$

$\overline{x} = 98.2$

$n = 106$

$s = 0.62$

$d = 0.05$

$df = 105$

$t_s = \frac{98.2 - 98.6}{\sqrt{\frac{0.62}{106}}}$

For two-tailed test, reject your $\alpha/2$.

Since $t_s$ falls in the critical region, we reject $H_0$.

There is sufficient evidence to support the claim that the mean body temp is different than 98.6°F. The test is significant.
$H_0: \mu = 65$

$H_1: \mu < 65$

$\mu_0 = 65$

$\bar{x} = 60.7$

$n = 12$

$s = 4.08$

$\alpha = 0.05$

$d.f = 11$

$t = \frac{(60.7 - 65)}{\frac{4.08}{\sqrt{12}}} = -3.651$

$t_{0.05, 11} = 1.796$

Reject $H_0$

Sufficient evidence to support the claim that the average speed on I-280 near Cupertino, CA is below 65 mph.

The test is significant.