1

As calculated in my previous lab,

$$\bar{y} = 1987.3$$
$$s = 8.5511$$

So the value of the standardized test statistic for the fist test is

$$t = \frac{\bar{y} - \mu_0}{s/\sqrt{n}}$$
$$t^* = \frac{1987.3 - 1987.714}{8.5511/\sqrt{10}}$$
$$t^* = -.1531$$

So, the p-value is

$$2Pr_0(t_9 \geq .1531)$$
$$2 \times .383.766$$

There is not enough evidence to reject the null hypothesis, $\mu = 1987.714$, at the 0.05 level.

2

For the other test $\mu_0 = 1991$, so the test statistic is

$$t = \frac{\bar{y} - \mu_0}{s/\sqrt{n}}$$
$$t^* = \frac{1987.3 - 1991}{8.5511/\sqrt{10}}$$
$$t^* = -1.36$$

and the p-value is

$$Pr_0(t_9 \leq -1.36)$$
$$.152$$

There is not enough evidence to reject the null hypothesis, $\mu = 1991$, at the 0.05 level.