 What Is Normal Body Temperature?

For many years, doctors have told people that “normal” body temperature is 98.6 $°$F. Today, we will find out if this is true. Record your body temperature at the front of the room (think of the class as an SRS of all high school students) and use [statsmedic.com/applets](http://www.statsmedic.com/applets) to find:  *s* = 

1. Is there convincing statistical evidence that the mean normal body temperature is different than the doctor’s claim? Use $α$= 0.05.

**CHOOSE: Choose the inference procedure and set it up.**

Choose procedure: Significance level:

Parameter: Statistic:

 Hypotheses: Evidence for Ha:

**CHECK: Check the appropriate conditions**

**CALCULATE: If conditions are met, perform the calculations**

General Formula: Picture:

Specific Formula:

Plug in numbers:

 Test statistic:

 *p*-value (use T-Test on calculator):

**CONCLUDE: Make a conclusion in the context of the problem.**

2. If we were to construct a 95% confidence interval, would the interval contain 98.6? Explain.

Lesson 11.2 – Significance Tests for a Mean

QuickNotes:

Check Your Understanding

Another class did the same body temperature activity with the following results:

 $\overbar{x}$ = 97.9 *s* = 1.6 n = 30

1. Use T-Test on the calculator to find the *p-*-value. *p*-value =

Reject H0 at ? Reject H0 at ? Reject H0 at ?

2. Use TInterval on the calculator to find the following confidence intervals.

90%:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 95%:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 99%:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reject H0? Reject H0? Reject H0?

3. What connection do you notice between your answers to #1 and #2?