Name: _____ Hour: _____ Date: _____

What is normal body temperature?

98.6 °F
Normal Body Temperature

For many years, doctors have told people that "normal" body temperature is 98.6 degrees Fahrenheit. Today, we will try to find out if this is true.

Take your body temperature and record it on whiteboard. Record the following for the data for the whole class (think of our class as an SRS of all high school students)

$\bar{x} =$ $s_x =$ $n =$

Do the data provide convincing evidence that the mean normal body temperature is different than the doctor's claim? Assume the conditions have been met.

State: Parameter: Statistic:

       Hypotheses: α:

Plan: Name of procedure:

Do: General: Picture:

       Specific:

       Work: Test Statistic:

                                               P-value:

Conclude:

Another class did the same activity with these results: $\bar{x} = 97.9$ $s_x = 1.6$ $n = 30$

1. Use T-test on the calculator to find the *P*-value =

Reject H₀ at $\alpha = 0.10$?   Reject H₀ at $\alpha = 0.05$?   Reject H₀ at $\alpha = 0.01$?

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?

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Significance Test for μ

Important ideas:

Check Your Understanding

According to a flyer created by BroadwayPartyRental.com, their 18-inch helium balloons fly, on average, for 32 hours. You purchase a SRS of 50 18-inch helium balloons from this company and record how long they fly. You would like to know if the actual mean flight time of all balloons differs from the advertised 32 hours.

1. State an appropriate pair of hypotheses for a significance test in this setting. Be sure to define the parameter of interest.

2. A 95% confidence interval for the mean flight time (in hours) for all helium balloons is (28.5, 31.4). Based on this interval, what conclusion would you make for a test of the hypotheses in #1 at the α = 0.05 significance level?

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