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AP STATISTICS – MS. KLIMCZUK

Graphing Calculator: Testing a Hypotheses

By now, probably nothing surprises you about your calculator. Of course it can help you with the mechanics of a hypothesis test. But that’s not much. It cannot write the correct hypotheses, check the appropriate conditions, interpret the results, or state a conclusion. You still have to do the tough stuff!

Let’s do the mechanics of the Step-By-Step example about the post-ultrasound male birthrate that we did. Based on historical evidence, we hypothesized that 51.7% of babies would be males, but one year at one hospital the rate was 56.9% among 550 births.

* Go to the STAT TESTS menu. Scroll down and select 1-PropZTest.
* Specify the hypothesized proportion $p\_{0}$.
* Enter x, the observed number of males. Since you do not know the actual count, enter 550\*.569 there and then round the resulting 312.95 off to a whole number.
* Specify the sample size.
* Since this is a two-tailed test, indicate that you want to see if the observed proportion is significantly different (≠) from what was hypothesized.
* Calculate the result.

Okay, the rest is up to you.

***What did the calculator give you for a z-score?***

***What did the calculator give you for a P-value?***

***Now state your conclusion.***