TI-*nspire*™

STATISTICAL INFERENCE: Confidence Intervals

by – Heather Haney

Activity overview
The students will construct 1-proportion confidence intervals. This lesson begins by having the students construct a confidence interval with the formula and then leads them through the steps needed to use the Nspire's statistical applications to construct confidence intervals. Students would do best if they work collaboratively on this activity. They will interpret and analyze confidence intervals in context.

Concepts
- *Confidence intervals: 1-proportion Z-Intervals*
- *Interpret confidence interval in context*
- *Analyze changes to confidence interval as confidence levels change*
- *Use formula and Nspire to construct intervals*
- *Higher level thinking skills*

Teacher preparation
The teacher will need to transfer the 1-Prop Confidence Intervals_ file to the Nspire handhelds and make copies of the student handouts for her or his students.
The teacher will need to have the 1-Prop Confidence Intervals ANSWERS file on a computer or ONE Nspire handheld to display at the end.
The teacher will need to have taught the students how to construct a 1-proportion confidence interval with the formula prior to this activity. This lesson builds on that prior knowledge.

Classroom management tips
The teacher should monitor students during this activity and assist as needed. This is a discovery lesson and students will require guidance as they work through the activity. Encourage students to work in collaborative groups or pairs.

TI-Nspire Applications
- *Statistics: Confidence Intervals: 1-Prop Z-Interval*
- *Document: 1-Prop Confidence Intervals—(*this is for the students)
- *Document: 1-Prop Confidence Intervals ANSWERS—*(this is for the teacher to display at the end)

Step-by-step directions

Distribute copies of the student handout and an Nspire handheld to each of the students.
Instruct the students to open the *1-Prop Confidence Intervals* file on their Nspires.
Instruct each student to save the file under his or her own name TOOLS 1: File 4: Save As… student name and date

Explain that the students will need to work on their Nspires and record their answers on their answer documents.

Allow students to work through the activity monitoring and assisting as needed. This lesson will work best if students are allowed to collaborate and discuss the questions as they work.

Collect the answer documents if you wish to grade them. Otherwise, students can check over their own answers.

Instruct the students to go back to the first question on their Nspires (they should have saved their work). Display the *1-Prop Confidence Intervals* ANSWERS file. Go through the activity as a class. Discuss answers and discoveries that have been made.

Clarify any misunderstandings and make sure that all students are now able to use the Nspire to construct a 1-proportion confidence interval.

Student TI-Nspire Document
STATISTICAL INFERENCE: Confidence Intervals

- *Separate student handout.*