Aurora Data Files

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Activity overview

Real world data, fresh from an Ohio school district, is used to have students model linear growth. Three files utilize the recent data to help students create their own best fit model, as well as use CAS and linear regressions.

Concepts

Linear data, regression, evaluating functions

Teacher preparation

Instruction on the TI-nspire with regard to navigating through a document, entering in text and performing calculations. Students will need some instruction with regard to slope, intercept, and dragging a line to change its slope. Evaluating a function and solving an equation are also required skills.

Classroom management tips

For the first two activities, (Enrollment and Tax Levy) the TI-nspire can be used. For the third file (Fuel Costs), a CAS must be used. (or the file can be adapted by the teacher!)

TI-Nspire Applications

Notes, Graphs and Geometry, Calculator, Spreadsheet

Step-by-step directions

Directions are embedded within the .tns file for students. See the student screenshot files.

Assessment and evaluation

Each activity provides formative assessment to the teacher with the level of success of the students. Additional data can be provided to the students, and instructions about how the students can create their own data analysis document with several pages that resemble the three provided activities. Students would be required to enter the data, create the scatter plot, fit a line by hand and/or by regression, and make predictions by function evaluation and/or solving an equation.

Activity extensions

- *Have students find their own data for nearby schools or businesses.*
- *Have students produce a "report" to the school board or an article for a newspaper that describes some trends with regard to similar issues and costs.*