

ZMATH 2016c.00920

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My car is worth what? Statistical modeling for predicting value.

Math. Teach. (Reston) 108, No. 9, 700-703 (2015).

From the text: During Algebra 2, students typically study statistical modeling involving linear, exponential, and quadratic functions. Students explore each type of function separately using verbal descriptions, ordered pairs, graphing, and equations. Calculator technology supports and extends student learning as teachers encourage both conceptual understanding of each model (constant increase or decrease, percentage increase or decrease, parabolic increase or decrease) and procedural competence (identifying, calculating, explaining, and using models). After some practice with data sets that are not already labeled as linear, exponential, or quadratic, students move to raw data sets, develop their own models, and justify their choices. Textbook activities, however, may not be adequate to ensure that students connect deeply with mathematical modeling. For many students, an end-of-unit assessment in which they each use their own data sets to personalize their grasp of modeling clinches their learning. This article develops a culminating activity that makes modeling authentic for an entire classroom at once.

Classification: K84 M94

Keywords: statistical modeling; regression models; authentic mathematical model building; mathematical applications; used car price; student activities; group work; worksheets

<http://www.nctm.org/Publications/Mathematics-Teacher/2015/Vol108/Issue9/My-Car-Is-Worth-What.-Statistical-Modeling-for-Predicting-Value/>