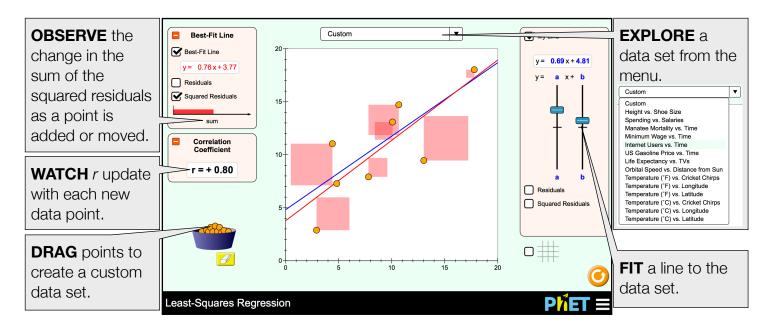


Least-Squares Regression

The *Least-Squares Regression* simulation encourages students to explore data on two quantitative variables, interpret the correlation coefficient, fit a linear function to various data sets, understand how to achieve a best-fit line, and determine whether a linear fit is appropriate.



Suggestions for Use

Sample Challenge Prompts

- Create a custom data set with...
 - a correlation coefficient that is *positive*.
 - a correlation coefficient that is *negative*.
 - a correlation coefficient of zero.
- Create a custom data set with a linear association. Try to fit a line to it using the My Line controls, explain how you decided on your final line, then show the Best-Fit Line to see how close you were.
- Create a custom data set and show the best-fit line. Choose a point to drag and observe how it influences the best-fit line.
- For each data set in the menu, determine if a linear fit is appropriate, and justify your answer.
- Why do we call this type of regression "least-squares"?

See all published activities for Least-Squares Regression here. For more tips on using PhET sims with your students, see Tips for Using PhET.