Watch. Practice. Understand. | Lesson 101

Calculus, Algebra II, Statistics. Using TI-84, or 84+, or CE to make Linear and Exponential...

Watch the matching video: https://www.youtube.com/watch?v=OwyQ6hWcKbE

Practice focus: Graphing and fitting models

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 The data are (0,2), (1,5), (2,8). Find an exact linear model and predict y at x = 5.

02 The data are (0,3), (1,6), (2,12). Find an exact exponential model.

03 A fitted model predicts 12.5 when the observed value is 14. Find the residual.

04 Use a graphing tool to find the intersections of $y = x^2$ and $y = x + 2$; then verify algebraically.

Worked answers | Lesson 101

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01 The data are (0,2), (1,5), (2,8). Find an exact linear model and predict y at x = 5.

Slope 3 and intercept 2 give y = 3x + 2; y(5) = 17.

02 The data are (0,3), (1,6), (2,12). Find an exact exponential model.

The values double with each unit of x: y = 3(2)^x.

03 A fitted model predicts 12.5 when the observed value is 14. Find the residual.

Residual = observed - predicted = 14 - 12.5 = 1.5.

04 Use a graphing tool to find the intersections of $y = x^2$ and $y = x + 2$; then verify algebraically.

$x^2 - x - 2 = (x - 2)(x + 1) = 0$. Intersections (-1,1), (2,4).