



Algebra II Journal

Module 1: Linear, Quadratic and Exponential Regression

Which Model Makes Sense?

This journal belongs to:

Module 1 Algebra II Journal: Which Model Makes Sense?

Algebra II Journal: Reflection 1

Respond to the following questions and submit your reflection to your teacher before continuing with the lesson.

What are the key features of each function type?

What are some situations that are typically modeled by each function family?

Module 1 Algebra II Journal: Which Model Makes Sense?

Algebra II Journal: Reflection 2

Respond to the following questions and submit your reflection to your teacher before continuing with the lesson.

Create a scatter plot for the vertical position data and determine which function type (linear, exponential or quadratic) may be the best fit for the data set.

Calculate and review the residual plot to determine if the model is the best fit. If you selected a linear model, analyze the correlation coefficient.

Justify why the model you selected is the best fit for the Vertical Position data.

Module 1 Algebra II Journal: Which Model Makes Sense?

Algebra II Journal: Reflection 3

Respond to the following and submit your reflection to your teacher.

Examine the following data set:

Andrew's parents want to buy him a car for his birthday. They have been investigating the Blue Book values of cars to determine which car will have the best resale value in 10 years. They have gathered the following information on one car:

Car Resale Value (2007 Model)

Year	2007	2008	2009	2010	2011	2012
Resale Value (in dollars)	14,500	12,600	11,000	9,400	8,350	7,200

Analyze the data set and determine the model of best fit. If you selected a linear model, be sure to also analyze the correlation coefficient. Justify why the model you selected is the best fit.

Once you have a model of best fit, use the model to estimate the resale value of the car in 2018.