

## Section 3.6 Nonlinear Models

**Objective:** In this lesson you learned how to fit exponential, logarithmic, power, and logistic models to sets of data.

Course Number

Instructor

Date

### I. Classifying Scatter Plots (Page 237)

When faced with a set of data to be modeled, what is a good first step in selecting which type of model will best fit the data?

***What you should learn***

How to classify scatter plots

### II. Fitting Nonlinear Models to Data (Pages 237–239)

Describe how to use a graphing utility to fit a nonlinear model to data.

***What you should learn***

How to use scatter plots and a graphing utility to find models for data and choose a model that best fits a set of data

**Example 2:** Find an appropriate model, either logarithmic or exponential, for the data in the following table.

$x$	1	3	5	7	9
$y$	1.120	2.195	4.303	8.433	16.529

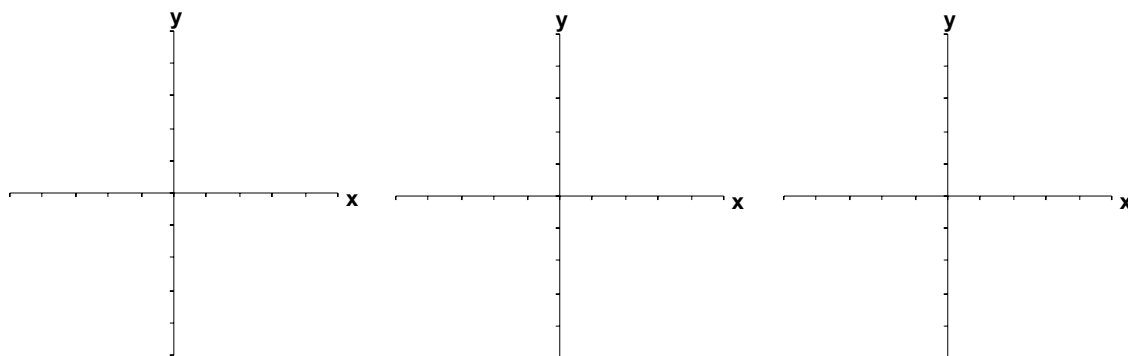
**III. Modeling With Exponential and Logistic Functions**

(Pages 240–241)

**Example 3:** Find a logistic model for the data in the following table.

$x$	0	10	15	20	25	30
$y$	5	27	50	73	88	95

***What you should learn***  
 How to use a graphing utility to find exponential and logistic models for data

**Additional notes****Homework Assignment**

Page(s)

Exercises