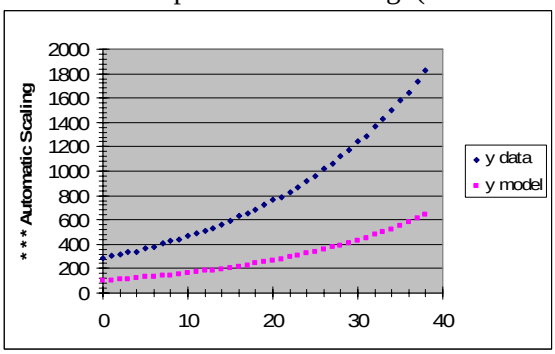
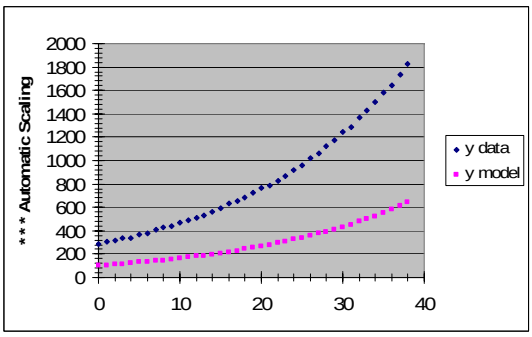
Problem 1. Exponential modeling (See the website for color pictures here. Those are easier to use.)

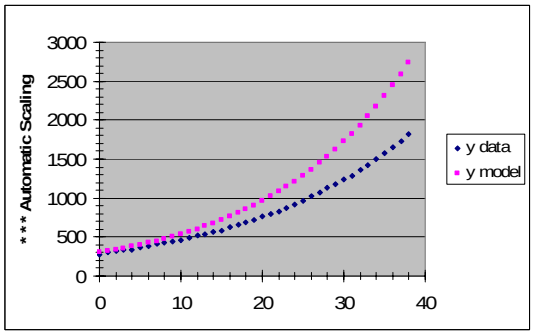



1. What is a reasonable estimate to use as the starting Initial value?




2. Should a reasonable estimate of the growth rate parameter for a good model here be positive or negative?

3. Is the growth rate parameter of the model that is graphed here positive or negative?




5. Does the value for the Initial value parameter in this model look about right?

6. Should the value for the growth rate parameter in this model be negative or positive? (Look at the data points.)

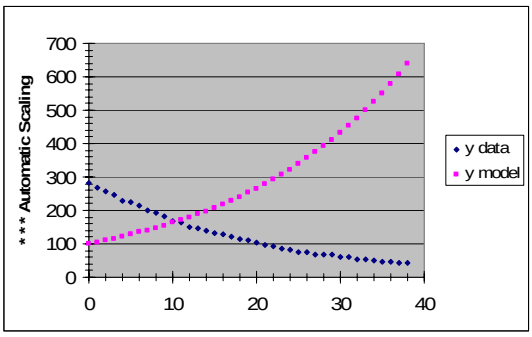
a. Is the value for the shape parameter in the model that is shown here negative or positive? (Look at the model points.)

b. To improve the model here,

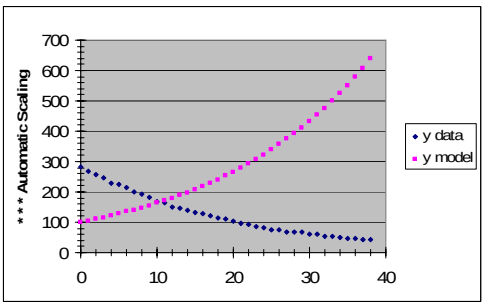
i. How should the value for the growth rate parameter be changed? (Choose one of these answers: (1) closer to zero or (2) further away from zero.)

ii. If the growth rate parameter in the model here is 0.06, give an example of a better estimate for the growth rate parameter.

Problem 4. Exponential modeling (See the website for color pictures here. Those are easier to use.)

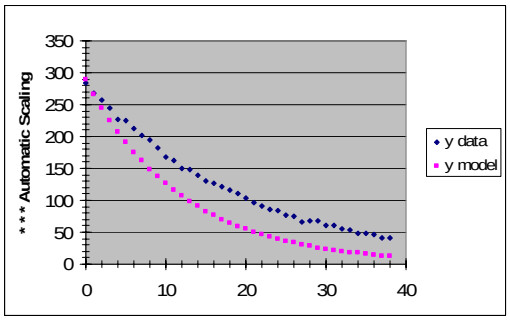



1. What is a reasonable estimate to use as the starting Initial value?




2. Should a reasonable estimate of the growth rate parameter for a good model here be positive or negative?

3. Is the growth rate parameter of the model that is graphed here positive or negative?




5. Does the value for the Initial value parameter in this model look about right?

6. Should the value for the growth rate parameter in this model be negative or positive? (Look at the data points.)

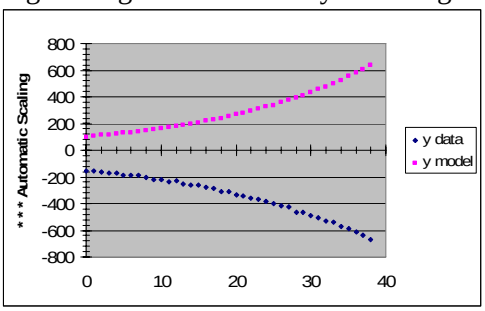
a. Is the value for the shape parameter in the model that is shown here negative or positive? (Look at the model points.)

b. To improve the model here,

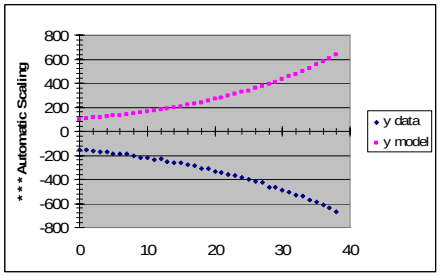
i. How should the value for the growth rate parameter be changed? (Choose one of these answers: (1) closer to zero or (2) further away from zero.)

ii. If the growth rate parameter in the model here is -0.08, give an example of a better estimate for the growth rate parameter.

Exponential Modeling Problem 8 (Recall that positive "growth" means away from zero, and negative "growth" or "decay" means going toward zero.)

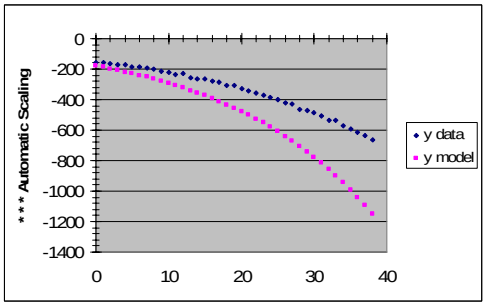



1. What is a reasonable estimate to use as the starting Initial value?




2. Should a reasonable estimate of the growth rate parameter for a good model here be positive or negative?

3. Is the growth rate parameter of the model that is graphed here positive or negative?




5. Does the value for the Initial value parameter in this model look about right?

6. Should the value for the growth rate parameter in this model be negative or positive? (Look at the data points.)

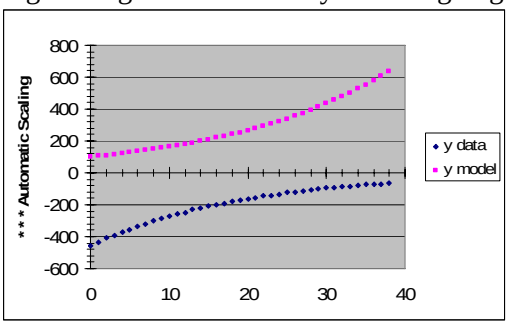
a. Is the value for the shape parameter in the model that is shown here negative or positive? (Look at the model points.)

b. To improve the model here,

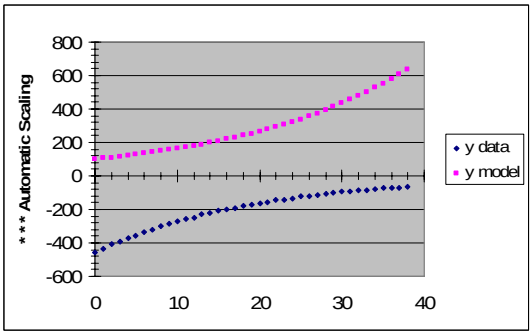
i. How should the value for the growth rate parameter be changed? (Choose one of these answers: (1) closer to zero or (2) further away from zero.)

ii. If the growth rate parameter in the model here is +0.05, give an example of a better estimate for the growth rate parameter.

Exponential Modeling Problem 9 (Recall that positive "growth" means away from zero, and negative "growth" or "decay" means going toward zero.)

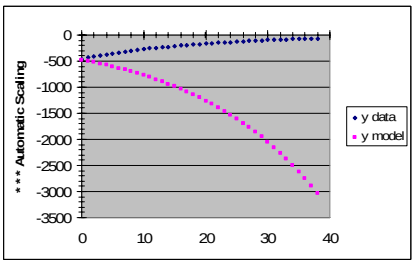


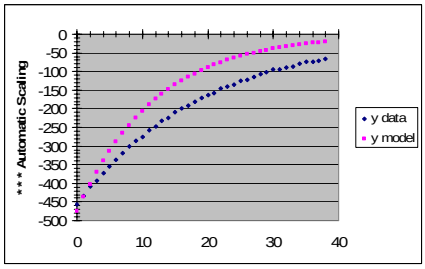

1. What is a reasonable estimate to use as the starting Initial value?




2. Should a reasonable estimate of the growth rate parameter for a good model here be positive or negative?

3. Is the growth rate parameter of the model that is graphed here positive or negative?




5. Does the value for the Initial value parameter in this model look about right?

6. Should the value for the growth rate parameter in this model be negative or positive? (Look at the data points.)

a. Is the value for the shape parameter in each of the models above negative or positive? (Look at the model points.) Give two answers – one for each picture.

b. To improve the model here,

i. For the model in the right-hand picture, how should the value for the growth rate parameter be changed? (Choose one of these answers: (1) closer to zero or (2) further away from zero.)

ii. If the growth rate parameter in the model on the left is +0.05, and the model on the right is -0.08 give an example of a better estimate for the growth rate parameter.