Question

Which of the following statements about polynomial regression is/are false? Select all that apply.

- ☐ *a.* Polynomial regression models belong to the category of nonlinear regression models.
- ☐ *b.* Polynomial regression models belong to the category of linear regression models.
- ☐ *c.* Polynomial regression models fit a curvilinear model to your data.

Correct.
Statement **a** is false. You might think that polynomial regression models belong to the category of nonlinear regression models because they use higher-degree terms of X. However, from the point of view of estimation, these models are *linear* because the regression function is linear in terms of the unknown parameters.

Question

Which of the following is false?

- ○ *a.* Polynomial regression is a nonlinear model, and therefore, you should not use PROC GLMSELECT.
- ○ *b.* When you remove terms from a polynomial regression model, you should follow the principle of model hierarchy.
- ○ *c.* It is important to check model assumptions after the final polynomial regression model is chosen.

Correct.
Remember that polynomial regression models belong to the category of *linear* regression models because the regression function is linear in terms of the unknown parameters.