

1. Weighted least squares is a potential solution to a violation of the constant variance assumption.

3 / 3 points

True

False

2. If the error vector is known to have a diagonal variance-covariance matrix (i.e., all entries off-of the diagonal are zero), then the constant variance assumption is necessarily met.

3 / 3 points

True

False

3. Under the assumption of constant variance of the error terms, the residuals also have a constant variance.

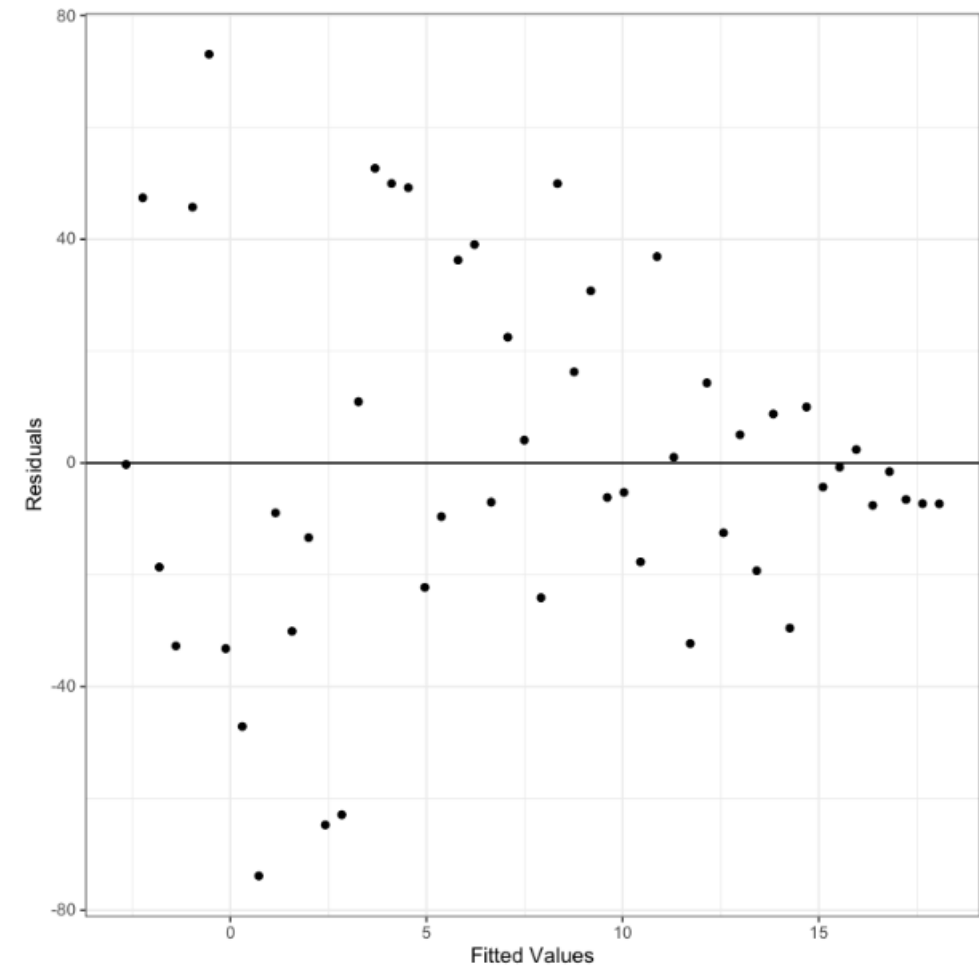
3 / 3 points

True

False

4.

3 / 3 points

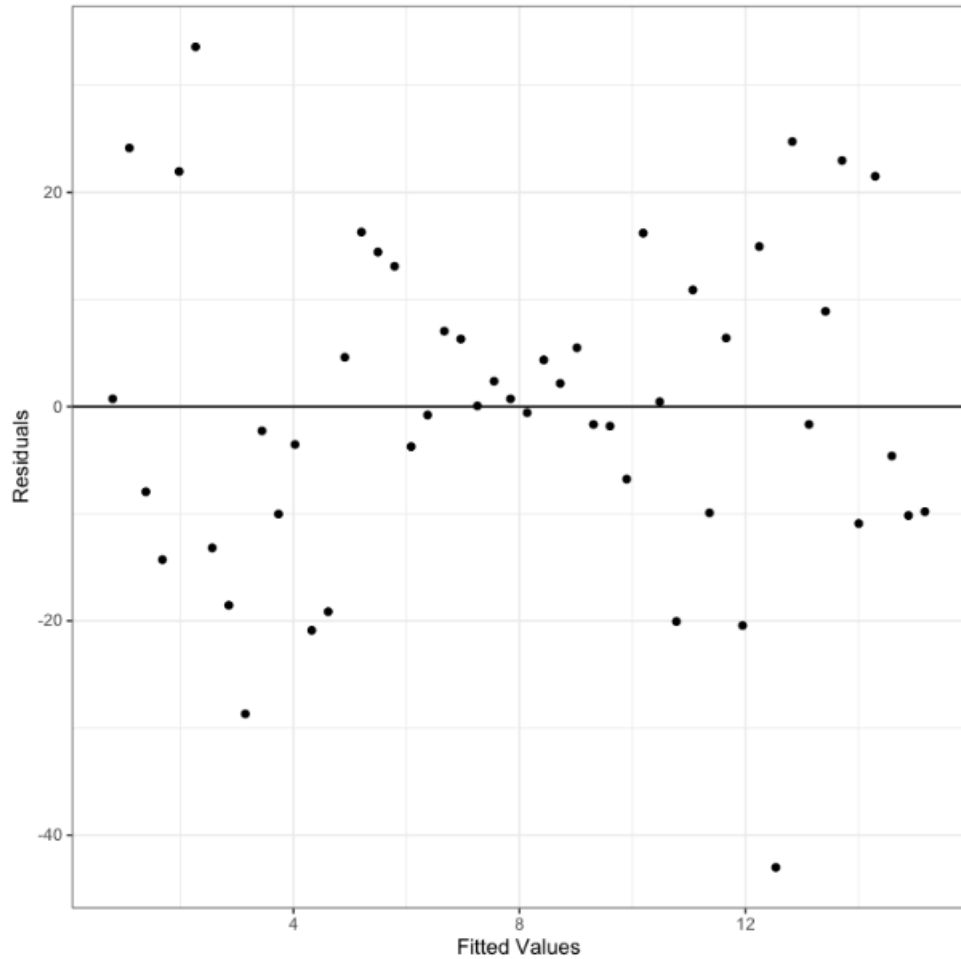


The above plot provides evidence of non-constant variance.

True

False

5.



The above plot provides evidence of non-constant variance.

- True
False

3 / 3 points

6. Which of the following methods can help diagnose non-constant error variance?

4 / 4 points

- A residuals vs potential predictor plot
- A residuals vs fitted value plot
- A predictor vs index plot
- A fitted value vs observed value plot

7. Which of the following methods can help diagnose deviations from the normality assumption?

4 / 4 points

- A residuals vs potential predictor plot
- A QQ plot
- The Shapiro-Wilk hypothesis test
- The Durbin-Watson hypothesis test
- A residuals vs fitted values plot
- A predictor vs index plot

8. The normality assumption is the most important assumption for performing linear regression parameter estimation.

3 / 3 points

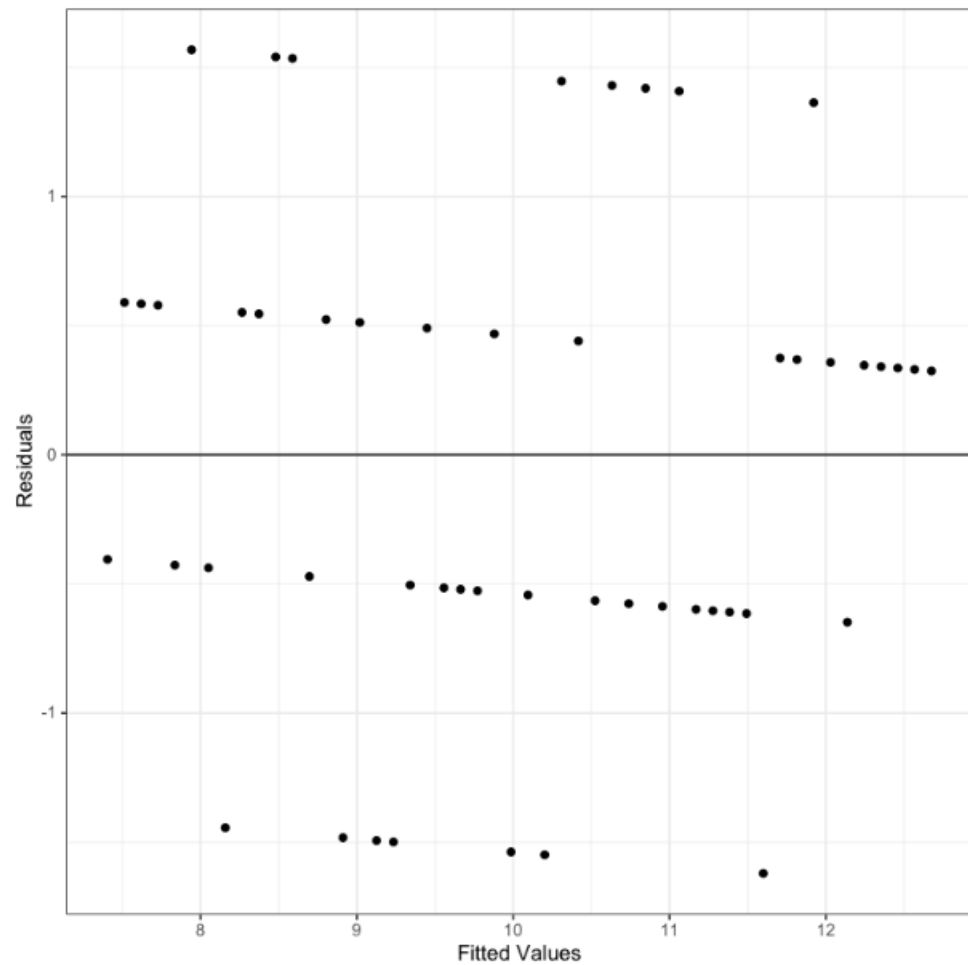
- True
False

9. Small deviations from normality produce large discrepancies in model fit.

3 / 3 points

- True
False

10.



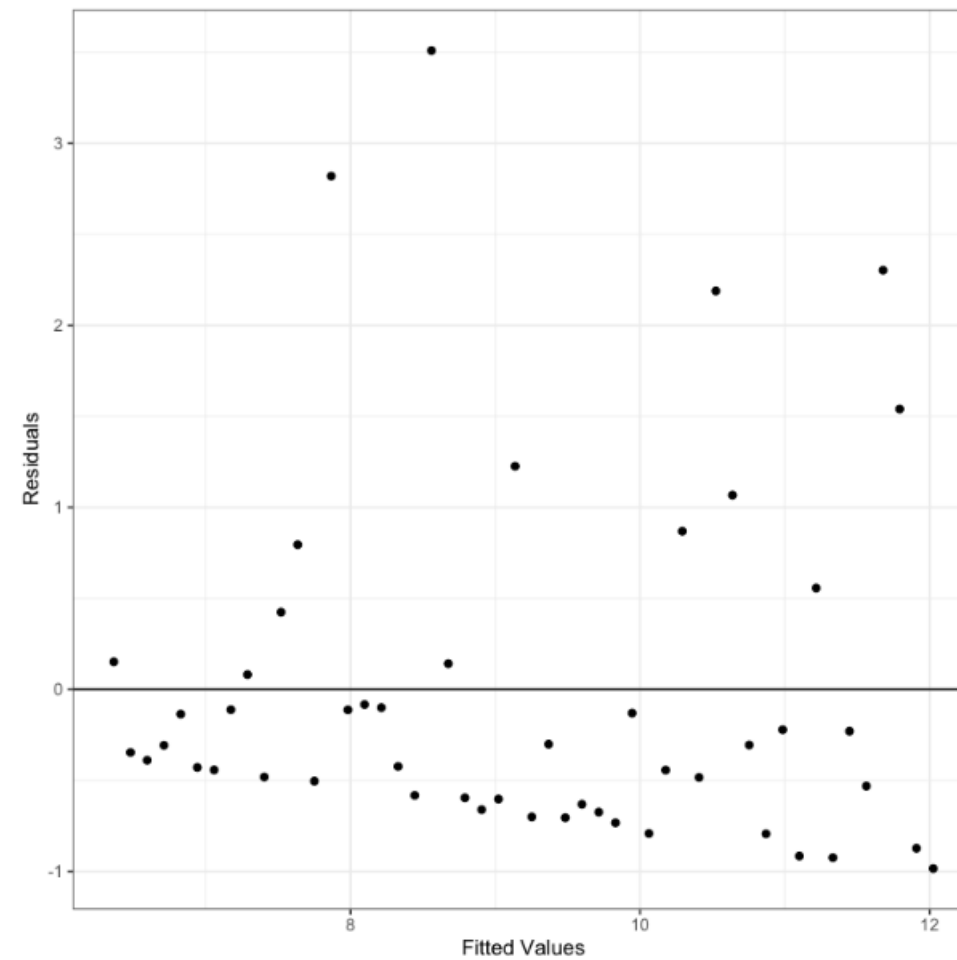
The above plot provides evidence of non-normality of errors.

True

False

3 / 3 points

11.



The above plot provides evidence of non-normality of errors.

True

False

3 / 3 points