I.
1. First regress \( \text{PRICE} \) against a constant, \( \text{SQFT} \), and \( \text{YARD} \) and obtain \( \beta_1, \beta_2, \) and \( \beta_3 \). Then compute \( \hat{u} \), as \( \text{PRICE} = \beta_1 - \beta_2 \cdot \text{SQFT} - \beta_3 \cdot \text{YARD} \).

2. The test statistic is \( \text{LM} = nR^2 = 59 \times 0.115 = 6.785 \). It is distributed as chi-square with 2 d.f.

3. From the chi-square table we have \( \text{LM}^* = 5.99146 \). Since \( \text{LM} > \text{LM}^* \), we reject the null hypothesis and conclude that either \( \ln(\text{SQFT}) \), or \( \ln(\text{YARD}) \), or both belong in the model.

4. The rule of thumb for inclusion is any new variable with \( p \)-value less than 0.50. By this rule, \( \ln(\text{SQFT}) \) should be included. The new model is

\[
\text{PRICE} = \beta_1 + \beta_2 \cdot \text{SQFT} + \beta_3 \cdot \text{YARD} + \beta_4 \cdot \ln(\text{SQFT}) + \nu
\]

II.
1. This statement is wrong. Although multicollinearity (MC) does raise the standard errors, the estimates are unbiased and consistent and the \( t \)- and \( F \)-distributions are valid. Therefore the tests are valid.

2. This statement is erroneous, just the opposite is true. MC increases the standard errors and lowers \( t \)-statistics. A lower \( t \)-statistic is likely to make a variable insignificant rather than significant.

3. The statement is wrong. Although \( t \)-tests might indicate individual insignificance, several variables may be jointly significant. If all the insignificant variables are dropped, we are likely to introduce serious omitted variable bias. We saw in Table 5.8 that both \( \text{LG} \) and \( \text{LP} \) are insignificant. But when \( \text{LP} \) was omitted in Model B, \( \text{LG} \) became significant. If we had eliminated both, we would have committed the specification error of omitting a variable (LG) that belongs in the model.