1. **Problem**
   Under the assumptions of the Gauss-Markov theorem the errors of a linear regression model need to be:

   (a) homoscedastic

   (b) identically distributed

   (c) zero

   (d) uncorrelated

   (e) normally distributed

   Solution
   Under the assumptions of the Gauss-Markov theorem the errors of a linear regression model need to be uncorrelated, homoscedastic, and with mean zero.

   (a) True. The errors need to be homoscedastic with finite variance.

   (b) False. No distribution assumption is needed.

   (c) False. Only their conditional expectation needs to be zero.

   (d) True. The errors need to be uncorrelated.

   (e) False. No distribution assumption is needed.