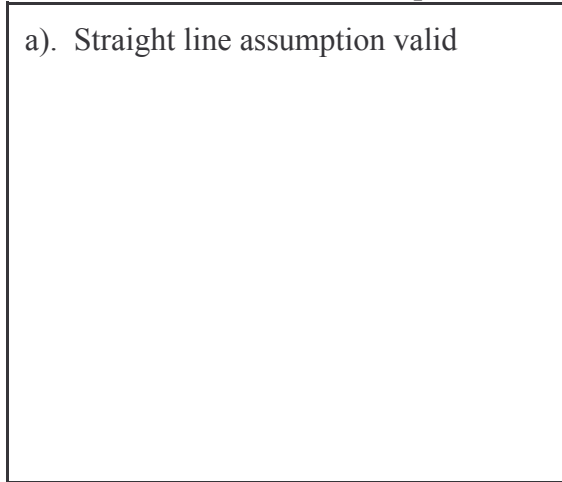
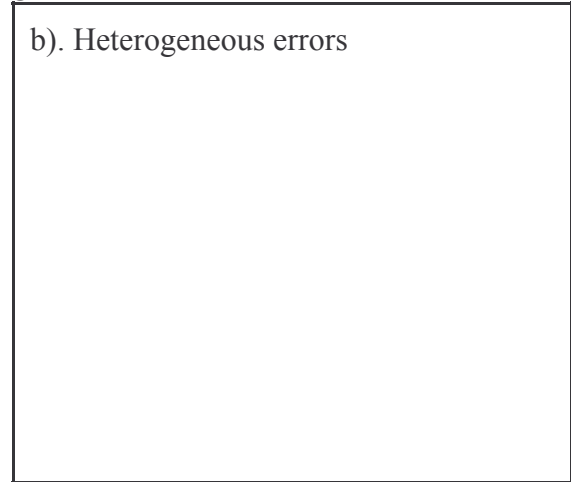


1. Draw a residual versus fit plot for the following situations.

a). Straight line assumption valid



b). Heterogeneous errors



2. According to D.S. Vaughn (*Canadian Special Publications in Fisheries and Aquatic Sciences* 120:231-241) recruitment of juvenile Atlantic Menhaden *Brevoortia tyrannus* is related to stock size as follows:

$$\text{Recruits}(S) = 0.221 S e^{k \cdot S}$$

Stock size has units of metric tons (ton = 10^3 kg).

Recruits(S) has units of megacounts/yr = million fish per year.

k is a parameter with a numerical value of $k = -0.0000101$, estimated as the slope of the regression of $\log_e \text{Recruits}(S)$ on the variable S .

a). Write an H_0 / H_A pair concerning the parameter k .

b). Complete an ANOVA table for the regression, assuming $n = 15$, $SS_{\text{total}} = 100$, $r^2 = 80\%$, where r^2 is the 'explained variance' (ratio of $SS_{\text{regression}}$ to SS_{total}).

Source	df	SS	MS	F
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