Discussion 11

Reading levels vary between different magazines. To avoid difficulties caused by different typefaces and sizes, an investigator just counted the number of letters and punctuation signs. Random samples of 20 sentences were selected from The New Yorker, Sports Illustrated, and National Geographic and the number of letters and punctuation signs in each were tabulated. The resulting summary statistics are:

New Yorker	Sports Illustrated	National Geographic
$\bar{y_1} = 94.4$	$\bar{y_2} = 92.9$	$\bar{y_3} = 75.5$
$s_1 = 58.4$	$s_2 = 54.2$	$s_3 = 38.1$
$n_1 = 20$	$n_2 = 20$	$n_3 = 20$

Note: $s_i^2 = \sum_{i=1}^{n_i} \frac{(y_{ij} - \bar{y_i})^2}{(n_i - 1)}$

1. In order to perform an ANOVA F test, what assumptions must be reasonably met? Check any of these assumptions you can.

2. Construct the ANOVA table for this data and perform the relevant F test (assume that the necessary assumptions are reasonably met.)