Регрессия 2 2/3.

Док-тб:

$$F = \frac{(RSS_{restricted} - RSS_{unrestr})/q}{RSS_{unrestr}/(n-k-1)} \quad (1)$$

$$F = \frac{(R^2_{unrestr} - R^2_{restr})/q}{(1-R^2_{unr})/(n-k-1)} \quad (2)$$

$$R^2 = 1 - \frac{RSS}{TSS}$$

$$RSS = (1-R^2)\cdot TSS$$

$$RSS_{res} - RSS_{un} = (1-R^2_{restr})TSS - (1-R^2_{unr})TSS =$$

$$= TSS(R^2_{unr} - R^2_{res})$$

$(1) \Leftarrow$

$$\frac{\frac{TSS}{q}(R^2_{unr} - R^2_{res})}{RSS_{unr}/(n-k-1)}$$

$$F = \frac{(R^2_{unr} - R^2_{res})\frac{TSS}{q}}{(1-R^2_{unr})\frac{TSS}{n-k-1}} \Rightarrow F = \frac{(R^2_{unr} - R^2_{res})/q}{(1-R^2_{unr})/(n-k-1)}$$

ч.т.д.