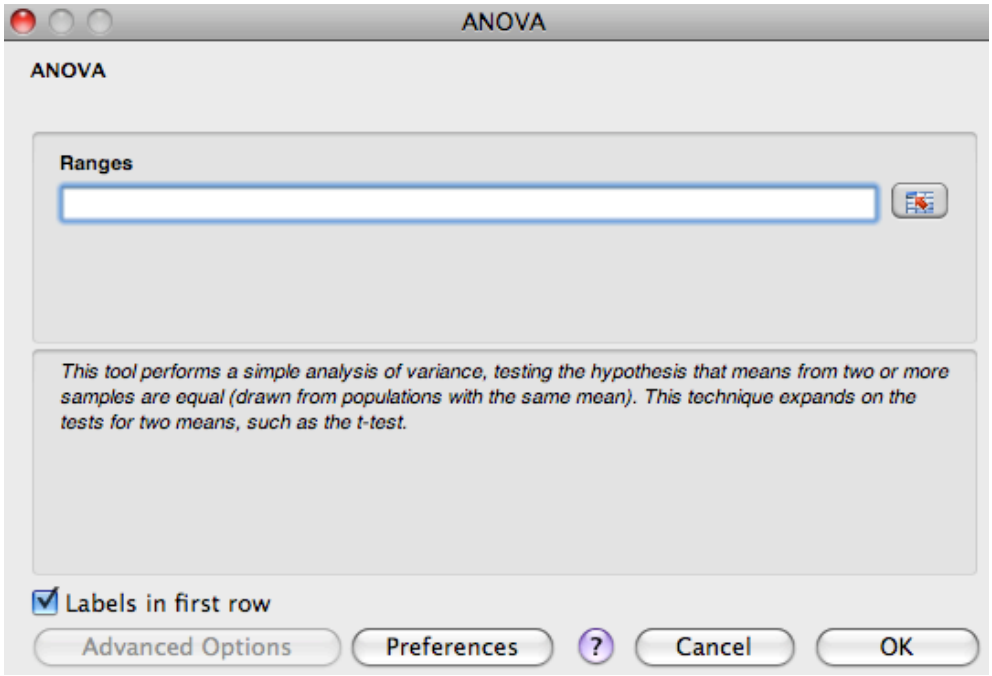
Hypothesis Tests on Excel 2008 for Mac
(by Tereza Chylkova)

- BASIC HYPOTHESIS TESTS
  - StatPlus will perform z-tests (one and two sample), t-tests (only two sample on the free version), F-tests, and correlations.
  - All of these can be found under "Statistics" → "Basic Statistics and Tables". Just click on the  buttons to retrieve your data like before and let StatPlus do the rest.

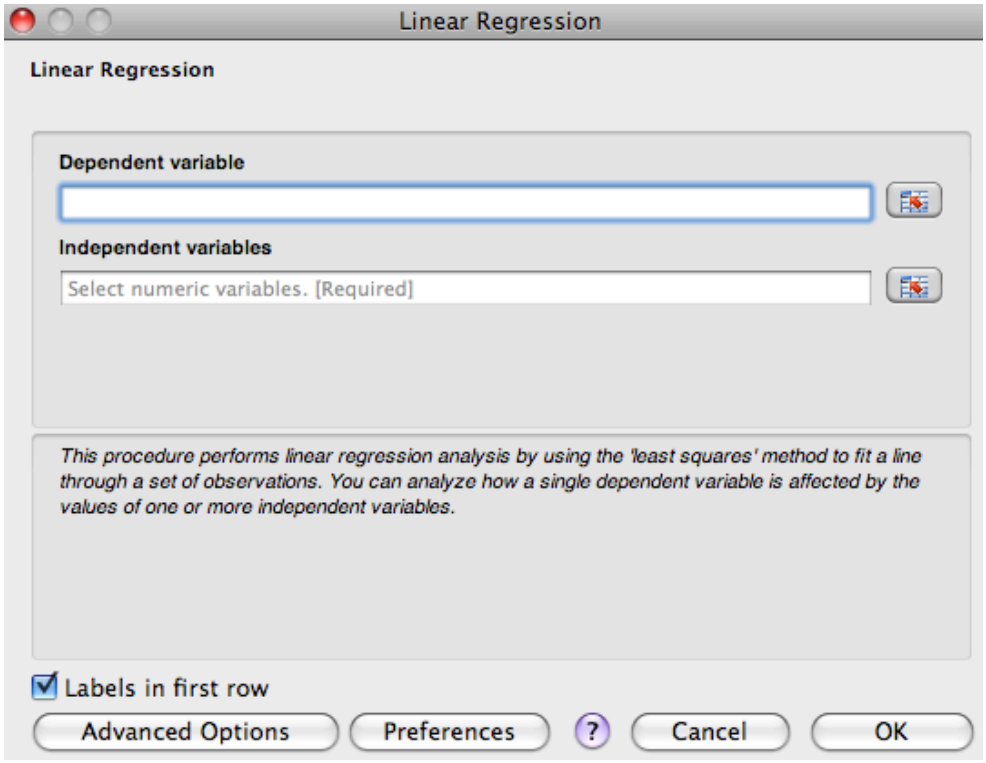
- ANOVA
  - To perform this test, go to "Statistics" → "Analysis of Variance (ANOVA)" → "One-way ANOVA…"
  - An options window will open up where you can input your data.



  - Uncheck "Labels in first row" if it is not the case, edit whatever you like in "Preferences" (such as your alpha value), and hit "OK".
  - A new Excel window will open up with results that look like this:

	A	B	C	D	E	F	G
1	Analysis of Variance (One-Way)						
2							
3	**Summary**						
4	*Groups*	*Sample size*	*Sum*	*Mean*	*Variance*		
5	*Series #1*	22	2.31E+2	1.05E+1	8.83E+0		
6	*Series #2*	22	2.14E+2	9.73E+0	7.26E+0		
7	*Series #3*	22	2.01E+2	9.14E+0	1.12E+1		
8							
9	**ANOVA**						
10	*Source of Variation*	*SS*	*df*	*MS*	*F*	*p-level*	*F crit*
11	Between Groups	2.06E+1	2	1.03E+1	1.13E+0	3.29E-1	4.17E+0
12	Within Groups	5.72E+2	63	9.09E+0			
13							
14	*Total*	5.93E+2	65				

- REGRESSION
    - To perform this test, go to "Statistics" → "Regression" → "Linear Regression…"
    - An options window will open up where you can input your data.
        - The dependent variable is your y-values and your independent variables are your x-values.



    - The "Advanced Options" will usually not be necessary, but you can edit whatever you like in "Preferences" (such as your alpha value).
    - Uncheck "Labels in first row" if it is not the case, and hit "OK".

- A new Excel window will open up with results that look like this:

	A	B	C	D	E	F	G	H
1	**Linear Regression**							
2								
3	**Regression Statistics**							
4	*R*	5.92E-2						
5	*R Square*	3.5E-3						
6	*Adjusted R Square*	-1.21E-1						
7	*Standard Error*	2.13E+1						
8	*Total Number Of Cases*	10						
9	**A = 52.9333 + 0.3939 * B**							
10								
11	**ANOVA**							
12		*d.f.*	*SS*	*MS*	*F*	*p-level*		
13	*Regression*	1.E+0	1.28E+1	1.28E+1	2.81E-2	8.71E-1		
14	*Residual*	8.E+0	3.64E+3	4.55E+2				
15	*Total*	9.E+0	3.65E+3					
16								
17		*Coefficients*	*Standard Error*	*LCL*	*UCL*	*t Stat*	*p-level*	*H0 (2%) rejected?*
18	**Intercept**	5.29E+1	1.46E+1	1.07E+1	9.51E+1	3.63E+0	6.66E-3	*Yes*
19	**B**	3.94E-1	2.35E+0	-6.41E+0	7.2E+0	1.68E-1	8.71E-1	*No*
20	*T (2%)*	2.9E+0						
21	*LCL - Lower value of a reliable interval (LCL)*							
22	*UCL - Upper value of a reliable interval (UCL)*							
23								
24	**Residuals**							
25	*Observation*	*Predicted Y*	*Residual*	*Standard Residuals*				
26	1	5.33E+1	-7.33E+0	-3.64E-1				
27	2	5.37E+1	2.13E+1	1.06E+0				
28	3	5.41E+1	-3.01E+1	-1.5E+0				
29	4	5.45E+1	-5.09E-1	-2.53E-2				
30	5	5.49E+1	3.21E+1	1.6E+0				
31	6	5.53E+1	-2.03E+1	-1.01E+0				
32	7	5.57E+1	-1.69E+0	-8.41E-2				
33	8	5.61E+1	8.92E+0	4.43E-1				
34	9	5.65E+1	1.75E+1	8.71E-1				
35	10	5.69E+1	-1.99E+1	-9.88E-1				