

31. TECHNOLOGY CORNER

ONE-WAY ANOVA ON THE CALCULATOR

TI-Nspire and HP Prime instructions on the book's Web site.

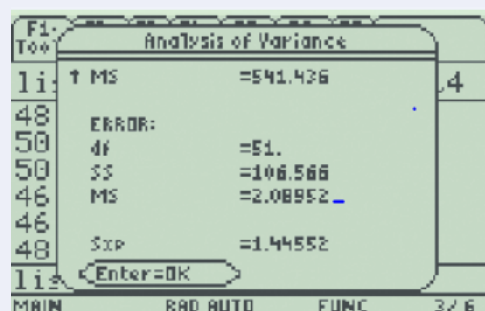
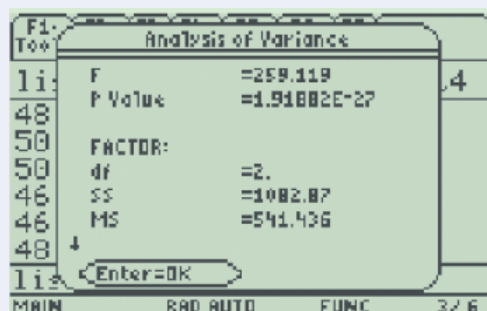
We will repeat the one-way ANOVA procedure of the previous examples using the *Heliconia* data. Begin by entering the data into lists: *bihai* → L1/list1, red → L2/list2, and yellow → L3/list3.

TI-89

- In the Statistics/List Editor, press $\boxed{2\text{nd}} \boxed{F1}$ ($\boxed{[F6]}$), and choose ANOVA. Set Data Input Method to “Data” and Number of Groups to “3.”



The results of the one-way ANOVA are shown in the following screens. The calculator reports that the F statistic is 259.12 and the P -value is 1.92×10^{-27} . The numerator degrees of freedom are $k - 1 = 2$, and by scrolling down, you see that the denominator degrees of freedom are $N - k = 54 - 3 = 51$. *Note:* What the calculator calls “Factor” is what we refer to as “Group.”



If you know the F statistic and the numerator and denominator degrees of freedom, you can find the P -value with the command $Fcdf$ in the CATALOG under FlashApps on the TI-89. The syntax is $Fcdf(\text{leftendpoint}, \text{rightendpoint}, \text{df numerator}, \text{df denominator})$. See the following screen shots.

F1=	F2=	F3=	F4=	F5=	F6=	
Tools	Algebra	Calc	Other	Prgm/D	Clean Up	

■ tistat.fcdf(259,12,1000,▶
1.9187E-27
...t.Fcdf(259,12,1000,2,51)

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