



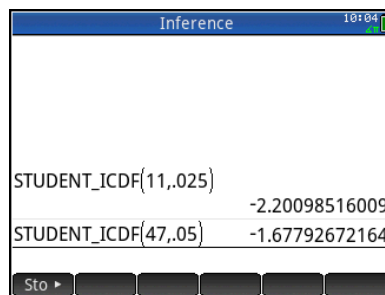
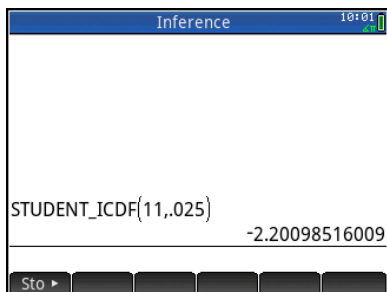


TECHNOLOGY CORNER

16. Inverse t on the HP Prime

HP Prime allows you to find critical values t^* using the inverse t command. As with the inverse Normal command, you have to enter the *area to the left* of the desired critical value. The inverse t command on the HP Prime is `STUDENT_ICDF()` and the syntax is `STUDENT_ICDF(degrees of freedom, area to the left)`. Let's use the inverse t command to find the critical values in parts (a) and (b) of the example.

- a) What critical t^* value should be used to create a 95% confidence interval based on an SRS of size $n=12$?
- Our 95% confidence interval requires a t^* value with area to the left of 0.025 and 11 degrees of freedom ($n-1$)
 - Press  to go to the Home view
 - Press , tap *Probability*, then tap *Inverse* and select *T*
 - Complete the command `STUDENT_ICDF(11,0.025)` and press
- b) What critical t^* value should be used to create a 90% confidence interval based on an SRS of size $n=48$?
- Our 90% confidence interval requires a t^* value with area to the left of 0.05 and 47 degrees of freedom
 - Repeat the first two steps from part a) and enter the command `STUDENT_ICDF(47, 0.05)`



Note that the t critical values are $t^* = 2.201$ and $t^* = 1.678$, respectively.