



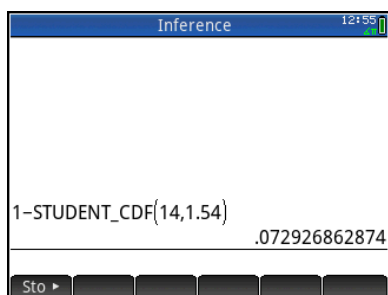
TECHNOLOGY CORNER

19. Computing P-values from t distributions on the HP Prime

You can use the `STUDENT_CDF` command on the HP Prime to calculate areas under a t distribution curve. The syntax of the command is `STUDENT_CDF(degrees of freedom, value)` and it calculates the area to the left of the desired critical *value* of a t distribution with the given *degrees of freedom*. Let's use the cumulative t command to find the P-values from the last two examples.

1. *Better batteries*: Find $P(t \geq 1.54)$. Since this problem involves the area to the right, we will use `1-STUDENT_CDF(14, 1.54)`

- Press to go to the Home view
- Enter
- Press , tap *Probability*, then tap *Cumulative* and select *T*
- Complete the command `1-STUDENT_CDF(14, 1.54)` and press



2. *Two-sided test*: Find $P(t \leq -3.17 \text{ or } t \geq 3.17)$.

Since this is a two-sided test, we will double the lower-tail probability.

- Enter the command `2*STUDENT_CDF(36, -3.17)`

