Finding t-critical values with your Calculator

Ti-84 calculator (very different for Ti-83 – scroll down for instructions)

Ok, if all you need is the t-critical value and that is it, then you would do this:

2nd then VARS (which is DISTR) and then go to invT

type in the area to the LEFT and the degrees of freedom.

So if you had 0.02 to the right and n = 8 (so 7 degrees of freedom)

the area to the left is 1 - 0.02 = 0.98.   The calc only works with the area to the left, so you always have to "convert it".

then you would type in invT(0.98, 7) and you would get 2.517 (if rounded to three places)

[Or for example if you were told something like "90% level of confidence" you know that means there is 10% left for the two tails, so there is 5% in each tail, so there is 5% to the right and therefor 95% to the left.]

You can also enter the area to the right (in the right tail) and then take the absolute value of the critical value. Because you have symmetry on both sides, for example if the critical value with an area to the right of 4% and 10 degrees of freedom you could find invT(0.04,10) and you would get -1.948. Since you actually wanted the area to the RIGHT to be 0.04 and this found the area to the left, just use positive 1.948 and that is the answer.

Ti-83 calculator

please keep in mind before reading this that you will NOT be asked to find a t-critical value on the final exam because the proctor will erase all programs from your calculator. Since you will not have tables, and cannot do this without the program, you will not be asked to do it. THEREFORE, if you want to just use the table to find this value while doing the homework and quizzes rather than bothering with this program, that is what I would suggest.

The Ti-83 does not have the "invT" function.   You can program this:

http://www.youtube.com/watch?v=5Ft5eZVJtPk   into your Ti-83 to find t-critical values (or just use the table – see above).

If it says area in right is .025, then calculate 1-.025=.975, use .975 then enter the degrees of freedom (because it will use the area to the left). When this prompt comes up in the program you can just type 1-.025 then the degrees of freedom. Don't subtract 1 (as in n-1) because it calculates only area to the LEFT.   This will all make sense one you input the program!