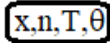# TI-83+ and TI-84+ Equation Solver Instructions

Put the equation you wish to solve in "zero-equal" form. For example: $2x + 3 = 4x^2 - 8$ is re-written as

$0 = -2x - 3 + 4x^2 - 8$

Press MATH and use ▲ to scroll through list to 0: Solver…

If the solver has been previously used, you will see a screen similar to the one shown in Figure 1. If this is the case, press ▲ and CLEAR to delete the old equation. You should then see the screen shown in Figure 2.

$\boxed{\text{x,n,T,}\theta}$ Type in the equation, using this key to embed the x-variable in your equation, which should look like the one shown in Figure 3 when you're done, then press ENTER.

Figure 4 shows what should appear after pressing ENTER. Whatever number for x that is left over from a previous use of the solver feature will appear. In this case, the leftover value is "8." The cursor will be blinking on the leftover value. Enter a "guess" for the solution you're seeking. I recommend you use a large positive guess such as 99. This is shown in Figure 5. The guess is often referred to as the "seed" from which the solution is grown:

Observe the flashing cursor at the right of the guessed value of 99. Now press ALPHA SOLVE. Figure 6 shows what should appear: the solution.

The solution is x = 0.85 (rounded to one-hundredth)

Note: the equation we solved is quadratic, so there are *two* solutions. If you repeat the above, but use -99 instead of 99, the second of the two solutions will appear:

x = - 2.35

Figure 1

-5x + 40
x = 8
bound   (Ignore)

left   (Ignore)

Figure 2

EQUATION SOLVER

eqn: 0 =

Figure 3

EQUATION SOLVER

eqn: $0 = -2x - 3 + 4x^2 - 8$

Figure 4

$-2x - 3 + 4x^2 - 8 = 0$
  x = 8 (blinking cursor)

Figure 5

$-2x - 3 + 4x^2 - 8 = 0$
  x = 99 (flashing cursor)

Figure 6

$-2x - 3 + 4x^2 - 8 = 0$

  x = .85078….
bound (ignore)
left   (ignore)