

How to compute area under the normal curve using the TI-83, TI-84

1. Select the Stat key to bring up the following window

```
2001 CALC TESTS
1:Edit...
2:SortA(
3:SortD(
4:ClrList
5:SetUpEditor
```

2. Use the rightarrow to get to the TESTS menu and select option 1: Z-Test

```
EDIT CALC TESTS
1:Z-Test...
2:T-Test...
3:2-SampZTest...
4:2-SampTTest...
5:1-PropZTest...
6:2-PropZTest...
7:ZInterval...
```

3. Upon hitting enter after choosing option 1 you will see the following screen:

```
Z-Test
Inpt: [ ] STAT
μ₀:36.2
σ:3.7
x̄:38.96666666...
n:6
μ:≠μ₀ <μ₀ >μ₀
Calculate Draw
```

4. Leave the Input line selected as STATS and enter the following information:
 - a. Use the down arrow to enter in the appropriate information. The μ_0 line is where you put the value of the mean of the distribution. (i.e. the value of μ)
 - b. Enter the standard deviation value for the distribution in the next line labeled with the σ .
 - c. For the \bar{x} value, enter the value of the boundary value of the shaded region whose value you are looking for.
 - d. Make sure that the value of n in the next line is set to 1.
 - e. If the area that you are looking for is an area to the left of a given boundary value, then choose the $<\mu_0$ option in the next to last line on the screen. If the area that you are looking for is an area to the right of a given boundary value then choose the $>\mu_0$ option. If the area you are looking for is a central area, then you will need to run the z-test twice (once to compute the area to the left of each boundary value) and then subtract the two areas to get the total central area.
 - f. Choose DRAW to have the calculator draw the appropriate area and compute the area itself.