**How To: Use the Normal Distribution Using the TI-84**

1. Turn on the calculator by pressing the **ON** button (lowest left hand button).
2. Press **2nd** and then **VARS,** this will pick **DISTR**.
3. If you are interested in the area under the normal curve with degrees with mean µ and standard distribution σ:
   1. For, P(a ≤ x ≤ b), select **normalcdf(**, then enter **a, b, µ, σ)**. Press **ENTER**.
   2. For P(a ≤ x), select **normalcdf(**, then enter **a, 10 ^ 99, µ, σ)**. Press **ENTER**.
   3. For P(x ≤ b), select **normalcdf(**, then enter “**(-)**” **10 ^ 99, b, µ, σ)**. Press

# ENTER.

1. If you want to find the z-score with area of p to the left, then select **invNorm(**, then enter

**p)**. Press **ENTER**.

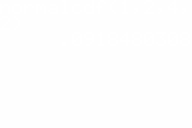
1. To find the x value with area p to the left when x ~ N(µ, σ), select **invNorm(**, and then enter **p, µ, σ)**. Press **ENTER**.

**Note:** The “**(-)**” is indicating the button on the bottom row of the calculator, next to the “**.**”.

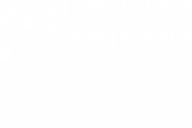
# Example to follow on next page 

**Example:**

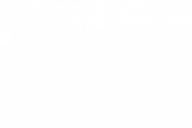
1. If you are interested in the area under the normal curve with mean 4 and standard distribution 2:
   1. For, P(1 ≤ x ≤ 2), select **normalcdf(**, then enter **1, 2, 4, 2)**. Press **ENTER**.



* 1. For P(1 ≤ x), select **normalcdf(**, then enter **1, 10 ^ 99, 4, 2)**. Press **ENTER**.



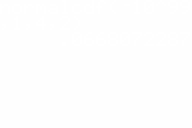
* 1. For P(x ≤ 1), select **normalcdf(**, then enter “**(-)**” **10 ^ 99, b, µ, σ)**. Press



# ENTER.



**3.** If you want to find the z-score with area of 0.25 to the left, then select **invNorm(**, then enter **0.25)**. Press



# ENTER.



**5.** To find the x value with area 0.25 to the left when x ~ N(4, 2), select **invNorm(**, and then enter **0.25**, **4, 2)**. Press **ENTER**.

