

Statistics Calculator Sheet (TI 83/84)

- **Stat-plots:**
 - To put X-values in L1: STAT → 1 (or enter) → plug in the x-values.
 - To put Y-values in L2: STAT → 1 (or enter) → right arrow → plug in the y-values.
 - 2nd → STAT PLOT → 1 → Press Enter on ON → Down arrow (So, cursor blinks on the graph types) → Choose second graph in first line (then, press enter) → Down arrow (Cursor on Xlist) → type L1 (2nd → L1) → Down arrow (Cursor on Ylist) → type L2 → Quit the window (by using 2nd → Quit) → ZOOM → 9.
- **Clear a column like L1:**
 - Up arrow (till the cursor is on the heading L1) → CLEAR → Enter.
- **Calculate normal statistics:**
 - For this you need to plug in your data in L1 (refer to Stat-plots: To put X-values in L1).
 - **FOR TI-84:** STAT → Right arrow → 1 (or enter) → type L1 → clear everything in FreqList → Down arrow (cursor on Calculate) → ENTER.
 - **FOR TI-83:** STAT → Right arrow → 1 (or enter) → type L1 → ENTER.
 - **Should look like:** 1-Var Stats L1
- **Calculate Frequency Statistics:**
 - Plug in your data values in L1 and frequency of each data in L2.
 - **FOR TI-84:** STAT → Right arrow → 1 (or enter) → type L1 → Down arrow (cursor on FreqList) → type L2 → Down arrow (cursor on Calculate) → ENTER.
 - **FOR TI-83:** STAT → Right arrow → 1 (or enter) → type L1 → type comma (above #7) → type L2 → Enter.
 - **Should look like:** 1-Var Stats L1, L2
- **Box-plot graph:**
 - Plug in data in L1.
 - 2nd → STAT PLOT → 1 → Turn ON → Type of graph: 2nd in second line → Xlist: L1 → Freq: 1 → Quit the window → ZOOM → 9.
- **Binomial probability for “exactly”:**
 - 2nd → DISTR → press down arrow till you see “binompdf” → Press ENTER
 - **For TI-84:** Type in the numbers as asked.
 - **For TI-83:** Type in the numbers in the following way: binompdf(n,p,x)
- **Binomial probability for “inequality”:**
 - 2nd → DISTR → press down arrow till you see “binomcdf” → Press ENTER

Inequality for x-value	Plug in binomcdf	Further steps (if needed)
Atmost (\leq)	x	–
More than ($>$)	x	1 – ANS (2 nd → ANS)
Less than ($<$)	x-1	–
Atleast (\geq)	x-1	1 – ANS (2 nd → ANS)

**similar to binompdf, but only x-values change while plugging into calculator.*

- **Geometric and Poisson Distribution:**
 - 2nd → DISTR → press down arrow till you see geometpdf/poissonpdf → Press ENTER.
 - **For TI-84:** Type in the numbers as asked.
 - **For TI-83:** Type in geometpdf(p,x) / poissonpdf(λ , x) or poissonpdf(μ ,x)

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- **Find Combination (${}_nC_r$):**
 - Type in 'n' → MATH → Right arrow till the cursor reaches PRB → 3 → Type in 'r.'
- **Find Permutation (${}_nP_r$):**
 - Type in 'n' → MATH → Right arrow till the cursor reaches PRB → 2 → Type in 'r.'
- **Normal Probability Distributions (for "exactly"):**
 - 2nd → DISTR → 1.
 - **For TI-84:** Plug in the numbers as asked (if mean and S.D. not given, then mean = 0, and S.D. = 1)
 - **For TI-83:** Type as follows: normalpdf(x, μ , σ)
 - **REMEMBER:** If z-score is given, replace x with z-score, and mean and S.D. automatically becomes 0 and 1, respectively.
- **Normal Probability Distribution for inequality:**
 - 2nd → DISTR → 2.

Inequality	Plug in normalcdf		Final look
	Lower limit	Upper limit	
Right of/More than (>)	Z-score or x	1E99 or 10000	Normalcdf(x, 1E99, μ , σ)
Left of/Less than (<)	-1E99 or -10000	z-score or x	Normalcdf(-1E99, x, μ , σ)
Between x_1 and x_2	X_1 or z-score 1	X_2 or z-score 2	Normalcdf(x_1 , x_2 , μ , σ)

- **How to type 1E99:** Type 1 → 2nd → EE (comma button) → Type 99.
- **Z-test:** STAT → Right arrow till you reach TESTS → 1 → Plug in numbers as asked.
- **T-test:** STAT → Right arrow till you reach TESTS → 2 → Plug in numbers as asked.
- **Z-test with two populations:** STAT → Right arrow till you reach TESTS → 3 → Plug in numbers as asked.
- **T-test with two samples:** STAT → Right arrow till you reach TESTS → 4 → Plug in numbers as asked.
- **Proportion test:** STAT → Right arrow till you reach TESTS → 5 → Plug in numbers as asked.
- **Proportion test for 2 samples:** STAT → Right arrow till you reach TESTS → 6 → Plug in numbers as asked.
 - For all of the above tests, choose the inequality of H_a no matter what the claim is.
- **Regression line:**
 - Plug in X-values in L1 and Y-values in L2.
 - STAT → Right arrow to CALC → 4
 - **For TI-84:** Plug L1 for Xlist and L2 for Ylist and leave everything else blank → Press Calculate.
 - **For TI-83:** Type L1 → Type Comma → Type L2 → Press ENTER.
 - 'a' and 'b' of the equation $ax+b$ is given, and r is the correlation coefficient.
 - Press 'Y=' → Type equation $ax+b$ with the values of 'a' and 'b' → Quit (2nd → Quit)
 - Now follow the steps for **Stat-plots** to get the graph (but, select the **first graph in first line** instead of the one shown in the **Stat-plots** steps).