Save This Sheet!


Calculator ID \#: Choose $2^{\text {nd }}$ MEM, \#1 About
ID****_****_****

## TI-83+/84+ Quick Reference Sheet

## CCSS Algebra 1 Level

## To Graph Lines (functions):

1. Enter equation in $\mathrm{Y}=$.
2. Use ZOOM \#6 (will give standard $10 \times 10$ window).
3. Use GRAPH to display graph.
4. Use WINDOW (to create your own screen settings).
5. Use TRACE to move spider on graph - arrow up/down between graphs

## To Find Intersection Pts:

1. Graph both equations.
2. Use CALC menu (2 ${ }^{\text {nd }}$ TRACE)

Choose \#5 Intersect
3. Simply press $<$ ENTER $>3$ times to reveal the answer.

If you are looking for more than one intersection point, you must repeat this process.

## To Plot Histograms and Box-Whisker Plots:

1. Place data in Lists: STAT $\rightarrow$ EDIT
2. Set up plot information: STAT PLOT $\# 1<$ ENTER $>$

Highlight ON, choose symbol for histogram, XList: $\mathrm{L}_{1}$ OR choose symbol for box-whisker, Freq: 1
3. Graph: ZOOM \#9 - TRACE to see values on graph
4. Xscl under WINDOW controls width of bars on histogram. An integer value is easiest to read.

## To Get Statistical Information:

1. Place data in Lists: STAT $\rightarrow$ EDIT

Diagnostics ON: must be ON to see correlation coefficient, $r$.

1. MODE - StatDiagnostics: ON or 2. CATALOG, ALPHA D, DiagnosticOn, ENTER, ENTER
2. Engage 1-Variable Statistics: STAT $\rightarrow$ CALC \#1 1-VAR STATS
3. On Home Screen indicate list containing the data: 1-VAR STATS $L_{1}$

$$
\begin{aligned}
\bar{x} & =\text { mean } & \mathrm{Q}_{1} & =\text { data at the first quartile } \\
S x & =\text { the sample standard deviation } & \text { med } & =\text { data at the median (second quartile) } \\
\sigma x & =\text { the population standard deviation } & \mathrm{Q}_{3} & =\text { data at the third quartile } \\
n & =\text { the sample size (\# of pieces of data) } & &
\end{aligned}
$$

To Get Scatter Plots and Regressions (Linear, Quadratic, Exponential, Power, etc):

1. Place data in Lists: STAT $\rightarrow$ EDIT
2. Graph scatter plot: STAT PLOT \#1 <ENTER> Choose ON.

Choose the symbol for scatter plot, choose $\mathrm{L}_{1}, \mathrm{~L}_{2}$, choose mark
3. To graph, choose: ZOOM \#9
4. To get regression equation: STAT $\rightarrow$ CALC \#4 Lin $\operatorname{Reg}(a x+b)$ ( or whichever regression is needed)
5. On screen: Xlist: $\mathrm{L}_{1}$ Ylist: $\mathrm{L}_{2}$ Store RegEQ: $\mathrm{Y}_{1}$ (or $\operatorname{Lin} \operatorname{Reg}(a x+b) \mathrm{L}_{1}, \mathrm{~L}_{2}, \mathrm{Y}_{1}$ )
6. to see graph - GRAPH

## Been Playing Games?

Run DEFAULTS to reset calculator. $2^{\text {nd }} M E M, \# 7$ Reset, \#2 Defaults, \#2 Reset

To get $Y_{1}$ on the calculator screen: ALPHA F4 or VARS $\rightarrow$ Y-VARS FUNCTION Y 1

To Get Residuals: After preparing a regression equation (using $\mathrm{L}_{1}$ and $\mathrm{L}_{2}$ ), residuals are stored in a list called RESID.
To plot residuals:

1. Go to top of $L_{3}$, press ENTER.
2. Go to LIST (2 ${ }^{\text {nd }}$ STAT) - choose \#7 RESID, press ENTER.
3. Go to STAT PLOT, Plot 1, ON
4. Type: first icon (scatter plot)
5. XList: $\mathrm{L}_{1}$ YList: $\mathrm{L}_{3}$
6. ZOOM 9:ZoomStat
