Save This Sheet !



Calculator ID #: Choose 2nd MEM, #1 About ID****_****

TI-83+/84+ Quick Reference Sheet

Algebra 2 Level

To Graph Lines (functions):

- 1. Enter equation in Y=.
- 2. Use ZOOM #6 (will give standard 10 x 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

Logs and Exponents:

- 1. The LOG key is log base 10.
- 2. To enter: $\log_4 64$ use $\frac{\log 64}{\log 4}$
- 2. $27^{\frac{1}{3}}$ is $27^{(1/3)}$ remember ()

To Get Statistical Information:

- 1. Place data in Lists: STAT \rightarrow EDIT
- 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 Q_1 = data at the first quartile \overline{X} = mean **med** = data at the median
 - S_{x} = the sample standard deviation
 - σ_x = the population standard deviation
 - n = the sample size (# of pieces of data)

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 L_1 , L_2 , choose mark
- 3. To graph, choose: ZOOM #9
- 4. To get regression equation: STAT \rightarrow CALC #4 Lin Reg(ax+b) (or whichever regression is needed)
- 5. On Home Screen: $LinReg(ax+b) L_1, L_2, Y_1$
- 6. to see graph GRAPH

To get Y_1 on the calculator screen: VARS \rightarrow Y-VARS Choose FUNCTION, Y₁ **To Find Intersection Pts:**

- 1. Graph both equations.
- 2. Use CALC menu $(2^{nd} TRACE)$ Choose #5 Intersect
- 3. Move near the intersect location.
- 4. Simply press <ENTER> 3 times to reveal the answer.

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

Summations: $\sum_{k=1}^{r} (2k+2)$

Enter sum(seq(2x+2, x, 2, 7, 1)

• 2nd STAT(LIST) – MATH - #5 sum • 2^{nd} STAT(LIST) – OPS - #5 seq The format for seq: expression, variable, starting value, ending value, increment.

To see $\sqrt{-25} = 5i$, use a + bi mode.

Check Inverse:

Enter your algebraic inverse in Y1. Graph. Use DRAW #8DrawInv to verify it is correct.

Functions:

 $Y_1 = f(x)$ and $Y_2 = g(x)$

$$(f+g)(x) \rightarrow Y_3 = Y_1 + Y_2$$

$$(f-g)(x) \rightarrow Y_3 = Y_1 - Y_2$$

$$(f \cdot g)(x) \rightarrow Y_3 = Y_1 Y_2$$

$$(f / g)(x) \to Y_3 = Y_1 / Y_2$$

Composition: $(f \circ g)(x) \rightarrow Y_3 = Y_1(Y_2)$

(second quartile)

 Q_3 = data at the third quartile