Deadlines

⇒ **<u>One Star:</u>** Directions and one example problem complete for two unique topics each

⇒ **<u>Another Star (TWO TOTAL STARS):</u>** Directions and one example problem complete for two more unique topics each

⇒ **<u>Another Star (THREE TOTAL STARS):</u>** Directions and one example problem complete for last two unique topics each

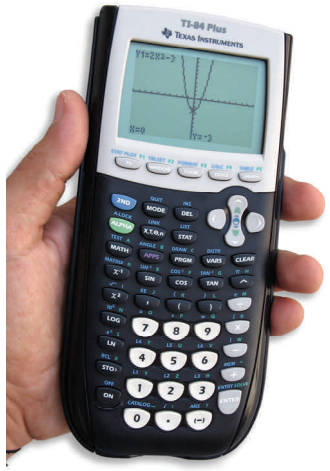
<u>Weebly Website:</u>

www.rhsalgebra1.weebly.com

Possible Topics

1. Simplifying Expressions
2. Evaluating Functions
3. Linear Transformations
4. Solving Systems of Equations
5. Solving Systems of Inequalities
6. Factoring
7. Quadratic Transformations
8. Finding a Quadratic Vertex
9. Solving Quadratics
10. Linear, Quadratic, or Exponential Regression

Calculator Manual Project (3 STARS)



Overview

Your manual will explain how to use the calculator to solve <u>SIX</u> different kinds of problems. The topic list for this is on the back of the brochure.

For each topic, you must provide:

1. Write step-by-step instructions on how to use the calculator for that topic
2. Model your instructions by solving one example problem per topic

Think Outside of the Box

You can create your manual (book, poster, comic, etc.) in whatever form you choose.

Step by Step Instructions

Anyone should be able to following your step-by-step instructions. These instructions should include written instructions for the following:

1) What buttons to press on the calculator
2) What order to press the buttons
3) Location of the button on the calculator

Example Problems

You must model your steps by solving at least one example problem per topic. You must pull these example problems from the problem bank on the Weebly website.

Grading Rubric

Creativity	10
Neatness	10
Detail	10
Correctness	35
Example Problems	35

Creativity: Imaginative work or work with original ideas

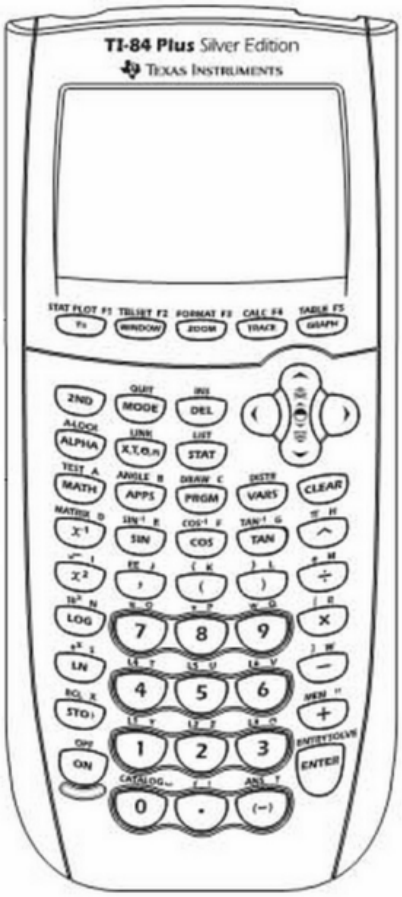
Neatness: Work is easy to read and completed with care

Detail Provided: Step-by-step instructions are extremely detailed and easy to follow

Correctness: Step-by-step instructions are correct. Each example problem is solved correctly and matches the steps.

Example Problems: There is one example problem provided for each topic. The problems provided match the given topic.

Topic	Problem Example
1. Simplifying Expressions	What is the simplified form of the expression $(15k+2)-(k^2-2)$? A. $14k+4$ B. $-k^2+15k$ C. $-k^2+15k+4$ D. $k^2+15k+4$
2. Evaluating Functions	Let $f(x)=-3x-2$. For what value of *x* does $f(x)=19$? A. *x* = -59 B. *x* = -7 C. *x* = 7 D. *x* = 55
3. Linear Transformations	How does the graph of $g(x)=f(x-5)$ compare to the graph of the linear parent function $f(x)=x$? A. It is a shift of $f(x)$ 5 units to the left. B. It is a shift of $f(x)$ 5 units to the right. C. It is a shift of $f(x)$ 5 units to the up. D. It is a reflection of $f(x)$ across the *x*-axis.
4. Solving Systems of Equations	Which of the following statement is true of the system below? $3x+y=-5$ $y+3x=4$ A. The system has one solution at $\left(\frac{7}{6},-\frac{1}{2}\right)$. B. The system has no solution. C. The system has infinitely many solutions. D. The system has one solution at $\left(-\frac{5}{3},9\right)$.
5. Solving Systems of Inequalities	Which of the following is a solution to the system of inequalities? $y>x+5$ $y\le-\frac{4}{5}x+10$ A. (7,1) B. (15,0) C. (8,2) D. (-15,22)
6. Factoring	Which of the following is equivalent to $44x^2-8x+12$? A $4(11x^2-2x+3)$ C. $4(11x^2-4x+3)$ B $-4(11x^2+2x-3)$ D. $-4(11x^2+2x+3)$
7. Quadratic Transformations	Zack graphed $y=x^2$ on a coordinate plane. Chris graphed $y=4x^2$ on a coordinate plane. How is Chris's graph different from Zack's graph? A. Chris's graph is wider than Zack's. C. Chris's graph is narrower than Zack's. B. Chris's graph is shifted 4 units right. D. Chris's graph is shifted 4 units left.
8. Finding a Quadratic Vertex	What is the vertex of the quadratic equation $f(x)=3(x-2)^2+4$? A. (-2, -4) B. (2, 4) C. (-2, 4) D. (2, -4)
9. Solving Quadratics	What are the solutions of the quadratic equation $5x^2-2x=8$? Round to the nearest tenth if necessary. A. No solution B. -1.1 C. 1.1 or -1.5 D. -1.1 or 1.5
10. Linear, Quadratic, or Exponential Regression	Which function best describes the relation in the table? $\begin{array}{c\|c\|c\|c\|c} x & 1 & 2 & 3 & 4 \\ \hline y & 3 & 1 & -1 & -3 \end{array}$ A. $y=2x+1$ B. $y=-2x$ C. $y=-2x+5$ D. $y=5x-2$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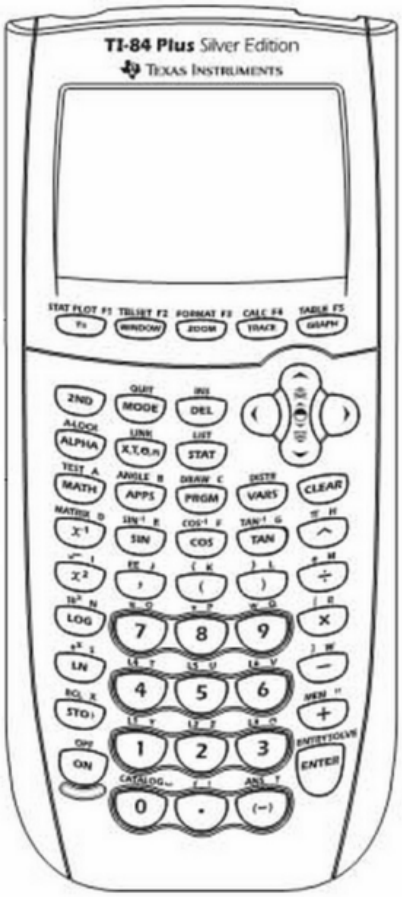
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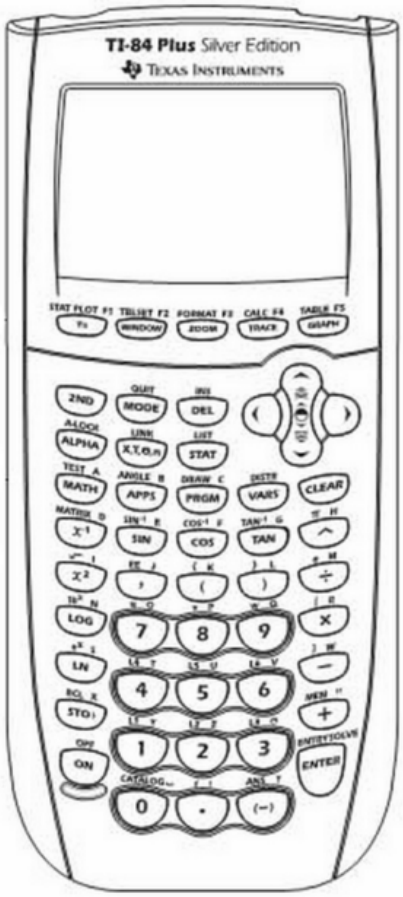
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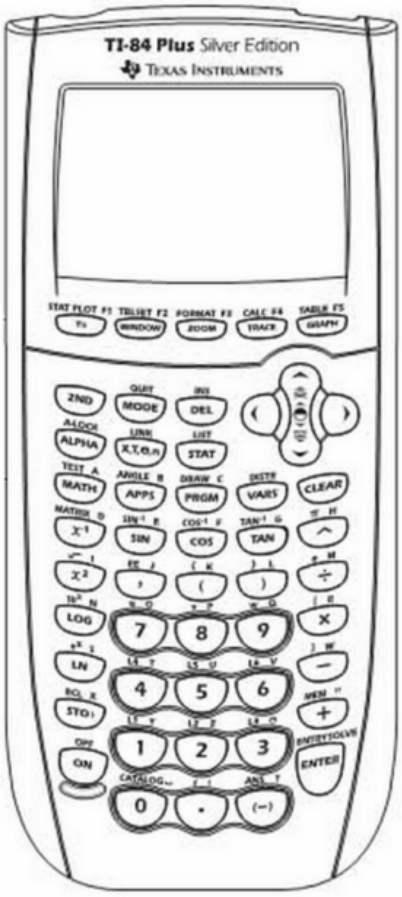
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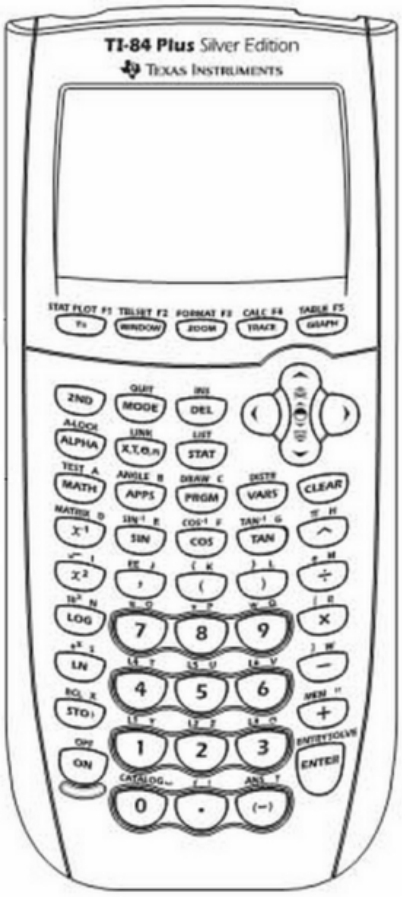
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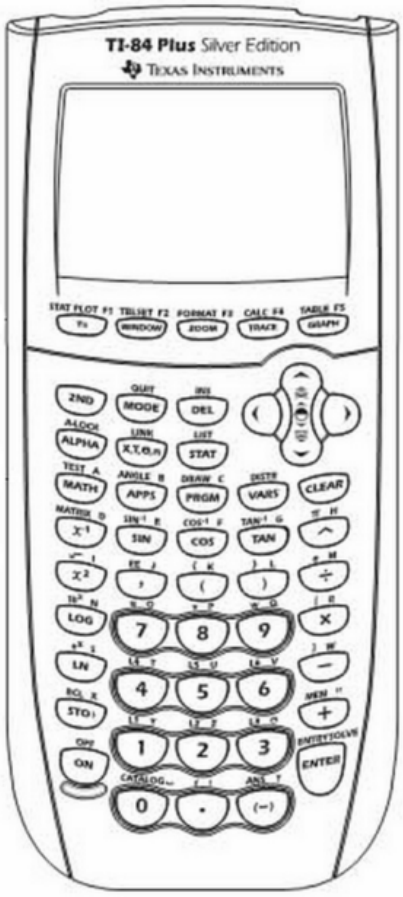
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