

CASIO®

Graphing Calculator Comparison Activities

GII



CASIO fx-9750GII

VS.

TI-83, TI-83 Plus, TI-84, TI-84 Plus

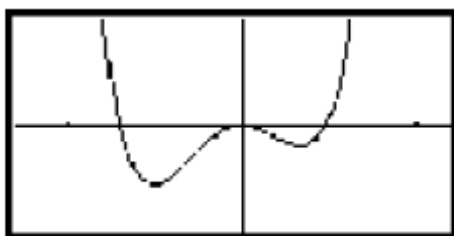
Finding Extrema Algebraically

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

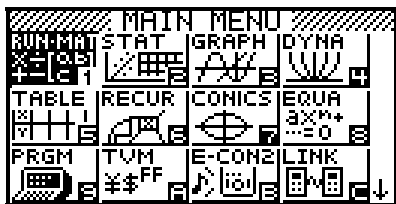
CASIO GRAPHING CALCULATORS

Finding max and min values of $f(x) = 9x^4 + 2x^3 - 3x^2$ from the RUN Menu

From the graph shown below, it appears that $f(x) = 9x^4 + 2x^3 - 3x^2$ has a global minimum on $[-1, 0]$, a local maximum at $x = 0$, and a local minimum on $[0, 1]$.



1. From the Main Menu, select the **RUN·MAT** icon.



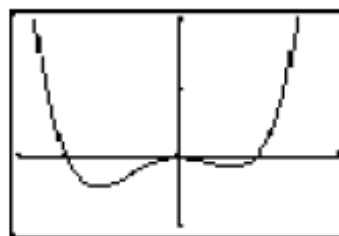
2. Press **OPTN**, **F4** (CALC), **F6** to move ahead one screen, then **F1** (FMIN). This will place the FMin command on the screen.



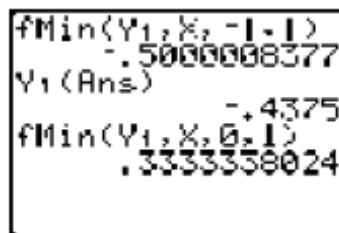
TI GRAPHING CALCULATORS

Finding max and min values of $f(x) = 9x^4 + 2x^3 - 3x^2$ in the "Run" module

From the graph shown below, it appears that $f(x) = 9x^4 + 2x^3 - 3x^2$ has a global minimum on $[-1, 0]$, a local maximum at $x = 0$, and a local minimum on $[0, 1]$.

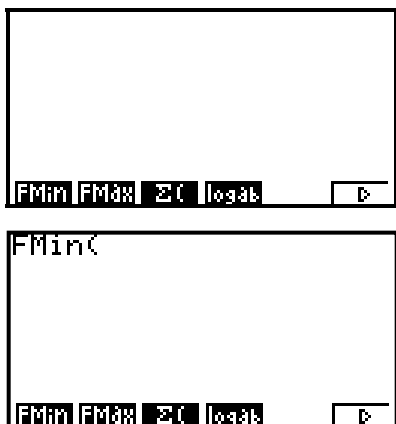


1. Enter the function in the Y=editor.
2. Press **MATH 6** to select fMin from the MATH/MATH menu.
3. Enter the function and then press **,**. If the function is stored in the Y=editor, press **VARS right arrow** and **ENTER**. Then press the number key corresponding to the number of the function in the Y= editor.
4. Enter the letter of the function variable (x) and press **'**.
5. Enter the lower limit of the interval containing the minimum, and press **)'**.
6. Press **ENTER** to find the absolute minimum in that interval.

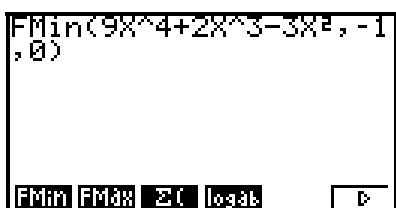


Finding Extrema Algebraically

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE



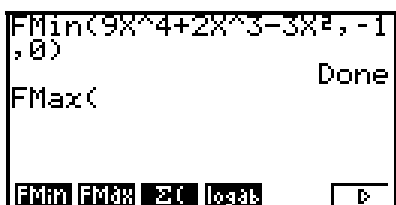
3. Into the FMin command, enter the following, separated by commas: the function $f(x)$, the lower bound, and the upper bound.



4. Then press **EXE**. Both the x- and y-values of the local minimum on $[-1, 0]$ will be displayed in a matrix format.



5. The maximum value can now be found in a similar manner by pressing **EXIT**, and then **F2** (FMax).



The calculator gives you the location (x-value) of the absolute minimum, as shown in the second line of the above screenshot.

The third line of this screenshot shows that you can evaluate the y-value of this minimum by entering the function and pressing **2nd ANS** to enter the x-value of this minimum.

The relative minimum in $[0, 1]$ can be found by further restricting the limits of the interval, as illustrated in the fourth line as shown in the screenshot.

The maximum value is found in a similar manner by pressing **fMax** to select fMax from the MATH/MATH menu.

Finding Extrema Algebraically

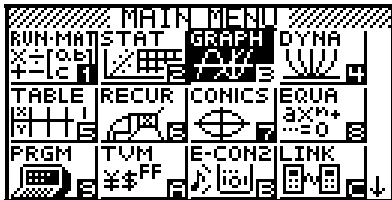
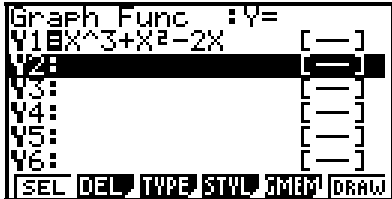
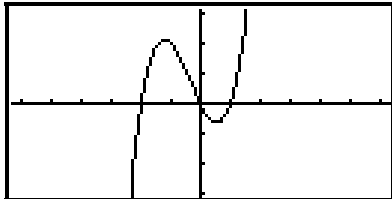

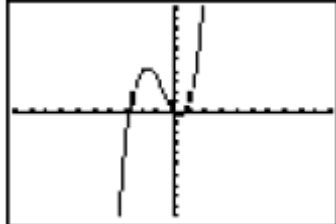
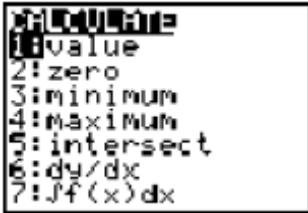
CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

THE CASIO ADVANTAGE

- Same functionality, but greater efficiency (fewer keystrokes)
- No danger of capturing an undesired value
- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI products

Finding Extrema Graphically (Min & Max)

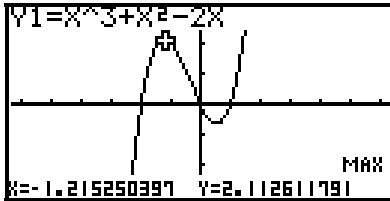
CALCULATORS: Casio: fx-9750GII
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CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
<p>1. From the Main Menu, select the GRAPH icon.</p>  <p>2. Enter the function to be graphed into the appropriate Y= slots. Press EXE to store.</p>  <p>3. Press F6 (DRAW) to view the graph of the function.</p> 	<p>1. Press Y=on the keyboard and enter the functions to be graphed into the appropriate slot.</p>  <p>2. Choose an appropriate window and produce the graph by pressing GRAPH.</p>  <p>3. Press 2ndCALC(F4) key to access the calculating functions.</p> 

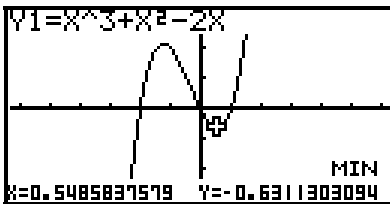
Finding Extrema Graphically (Min & Max)

CALCULATORS: Casio: fx-9750GII
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4. To find the relative maximum point(s): Press **F5** (G-Solv) then **F2** (MAX). The left most relative maximum value will be displayed first.



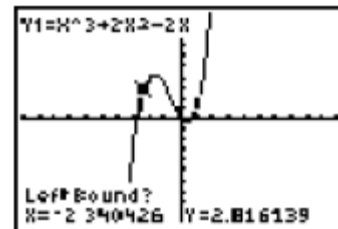
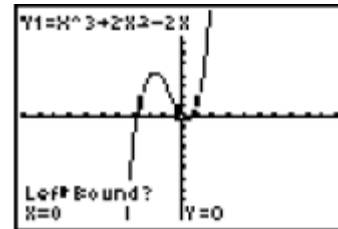
5. To find the relative minimum point(s): Press **F5** (G-Solv) then **F3** (MIN). The left most minimum value will be displayed first.



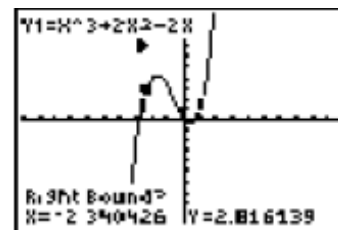
7. Press the **right arrow** to look for the “next” relative min, which it will find, and display. However, if there is no additional value it will come back to the one it just found; confirming it is the only one. (If the value is not in the horizontal graphing window, i.e. the specific domain, the calculator will NOT find it.)

4. You can both scroll down to item #4 and press **ENTER**, or you can press **4** directly to activate the maximum function. Once it's active you must go through the following steps:

- You must capture a left bound to the extrema by moving the cursor and pressing **ENTER**.



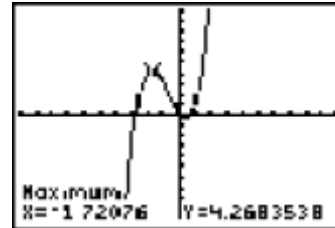
- You must then capture a right bound to the extrema by moving the cursor and pressing **ENTER**.



Finding Extrema Graphically (Min & Max)

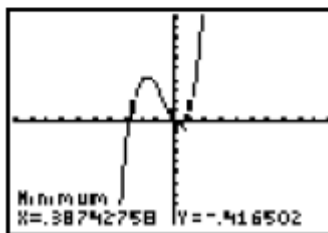
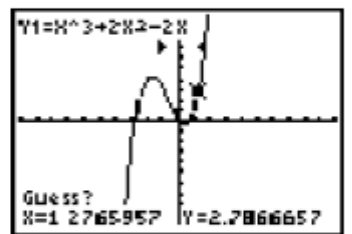
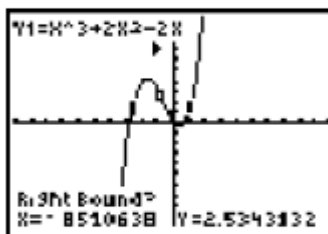
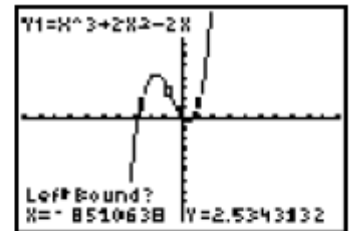
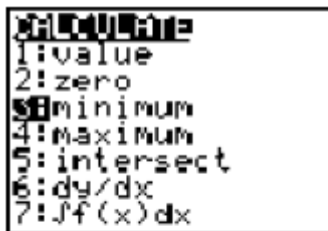
CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84Plus, and TI-84 SE

- You must then press ENTER another time to tell the calculator to actually do the calculation and find the extreme point.



Note: if you do not correctly capture the region surrounding the extremum, it will still give you an answer. The TI is not actually reporting a relative min or max, it's reporting the minimum or maximum value based on your capture region.

5. Then find the minimum you must replicate the entire process. The screens are provided to show the process and the result:



THE CASIO ADVANTAGE

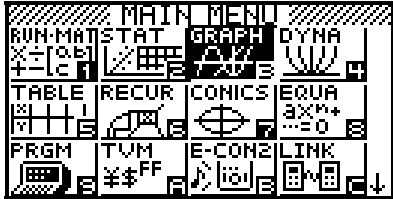
- Same functionality, but greater efficiency (fewer keystrokes)
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- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI products

Finding Intersections

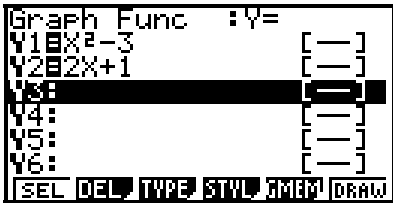
CALCULATORS: Casio: fx-9750GII
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CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
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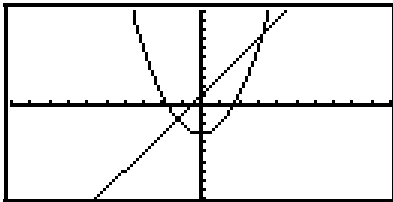
1. From the Main Menu, select the **GRAPH** icon.



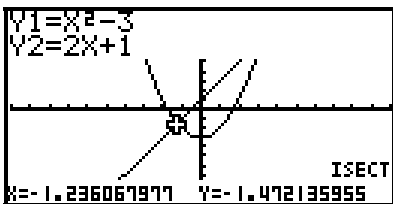
2. Enter the functions to be graphed into the appropriate Y=slots. You must press **EXE** to store each function.



3. To view the graph press **F6** (DRAW).



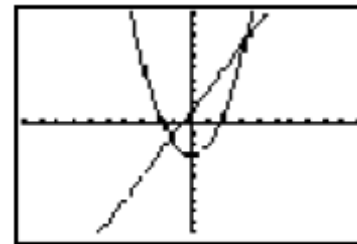
4. To find the intersection(s), press **F5** (G-Solv). The left most intersection will be displayed first.



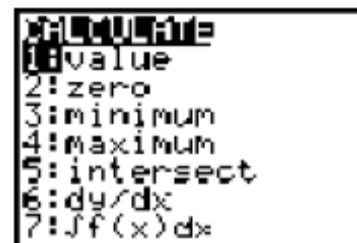
1. Press **Y=** on the keyboard and enter the functions to be graphed into the appropriate slot.



2. Choose an appropriate window and produce the graph by pressing **GRAPH**.



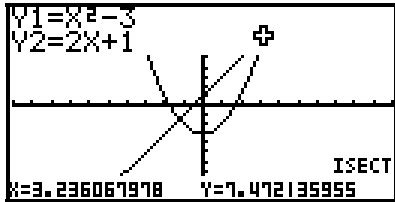
3. Press **2nd CALC**(F4) key to access the calculating functions.



Finding Intersections

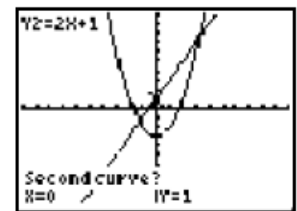
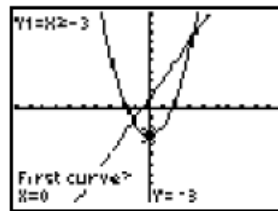
CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84Plus, and TI-84 SE

5. Press the **right arrow** on the Replay keypad to search for the next intersection point.

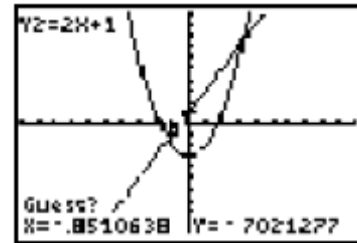


4. You can both scroll down to item #5 and press **ENTER**, or you can press **5** directly to activate the maximum function. Once it's active you must go through the following steps:

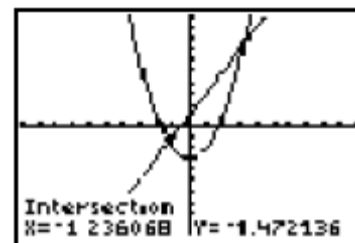
Once it's active you must press **ENTER** to choose the first function, then **ENTER** a second time to choose the second function.



5. Use the arrow keys to move the tracer toward the intersection you want and press **ENTER**.



6. It will then display the intersection.



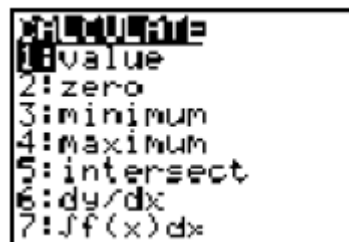
Finding Intersections

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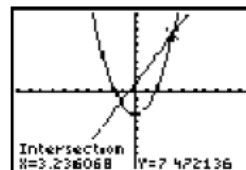
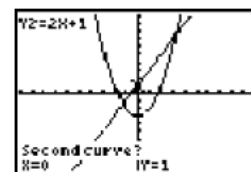
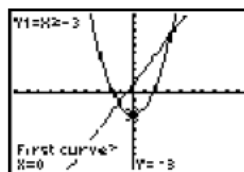
THE CASIO ADVANTAGE

- Same functionality, but greater efficiency (fewer keystrokes)
- Ease of repetition (no need to repeat the entire process)
- Instructive: students still must analyze proper domain
- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI models

7. To find the second intersection point you must replicate the entire process. Press 2nd CALC to access the calculating functions.



8. Choose intersections again. Press **ENTER** twice to choose the functions, then move toward the other intersection. Press **ENTER** to display.

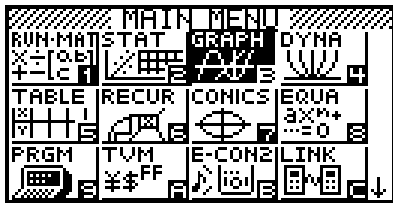


Finding Roots Graphically

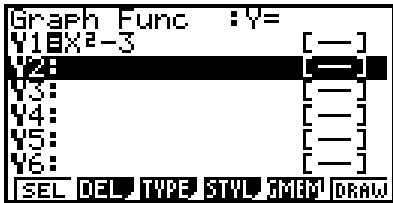
CALCULATORS: Casio: fx-9750GII
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CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
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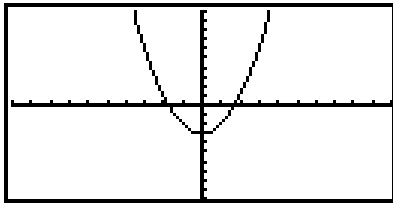
1. From the Main Menu, select the **GRAPH** icon.



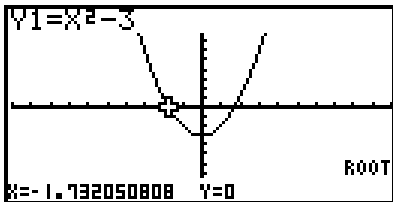
2. Enter the function to be graphed into the appropriate Y= slot and press **EXE**.



3. To view the graph, press **F6** (DRAW).



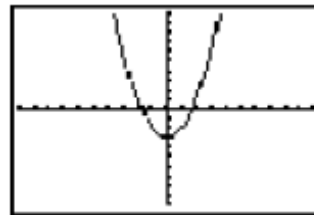
4. Press **F5** (G-Solv) then **F1** (ROOT) to calculate the root. The coordinates of the left-most root will be displayed first.



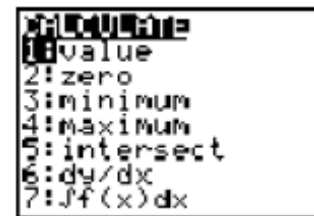
1. Press **Y=** on the keyboard and enter the functions to be graphed into the appropriate slot.



2. Choose an appropriate window and produce the graph by pressing **GRAPH**.



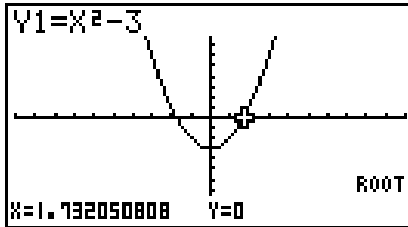
3. Press **2nd**CALC(F4) key to access the calculating functions.



Finding Roots Graphically

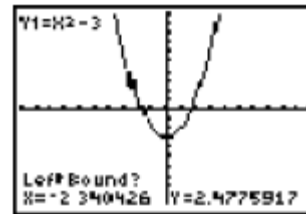
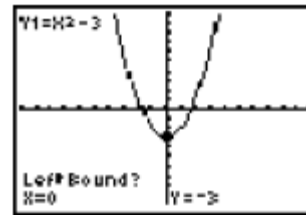
CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, TI-84 SE

5. Press the **right arrow** on the Replay keypad to search for the next root in the viewable domain. (If the function has additional roots not within the current window settings, they will not be found and displayed.)

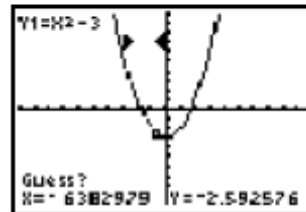
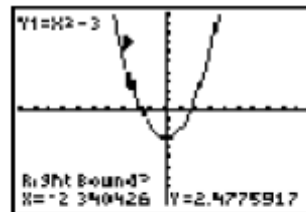


4. You can both scroll down to item #2 and press ENTER, or you can press 2 directly to activate the zero (root) function. Once it's active you must go through the following steps:

- You must capture a left bound to the root by moving the cursor and pressing ENTER.



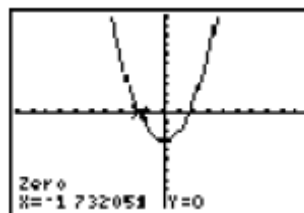
- You must then capture a right bound to the root by moving the cursor and pressing ENTER.



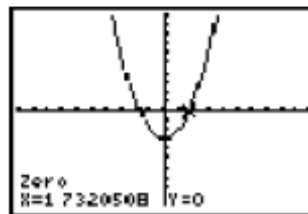
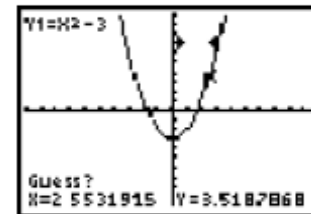
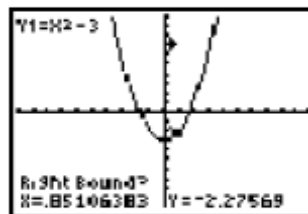
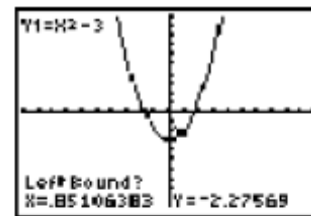
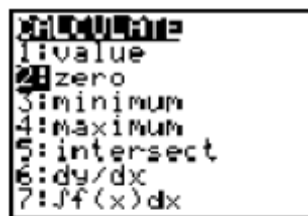
Finding Roots Graphically

CALCULATORS: Casio: fx-9750GII
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- You must then press ENTER another time to tell the calculator to actually do the calculation and find the root.



5. To find additional roots you must replicate the entire process each time. Example: just the screens for finding the right root:

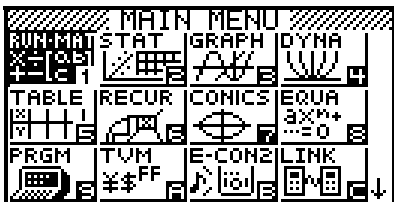

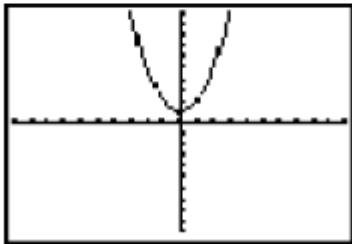
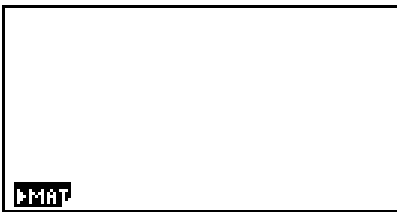

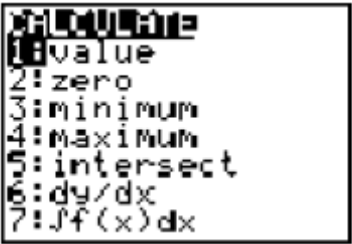


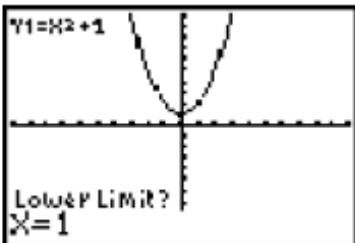


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Graphing Definite Integrals

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
<p>Showing the graph of a definite integral</p>	<p>Showing the graph of a definite integral</p>
<p>1. From the Main Menu, select the RUN·MAT icon.</p>	<p>1. Graph the function in a standard window.</p>
	
<p>2. Press SHIFT, then F4 (SKTCH).</p>	
	<p>2. Press 2nd CALC 7 to access integral shade.</p>
	
	<p>3. Enter the lower bound by pressing 1 ENTER</p>
<p>3. Press F5 (GRPH), then F5 ($\int dx$).</p> 	

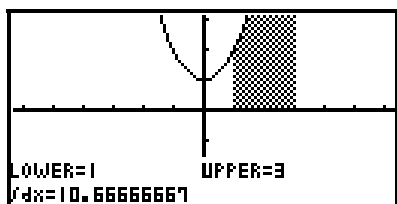
Graphing Definite Integrals

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

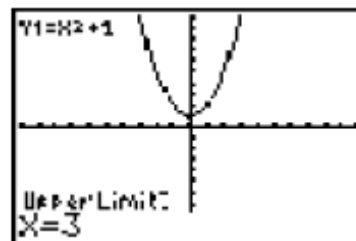
4. Enter the function, lower limit, and upper limit, all separated by commas.



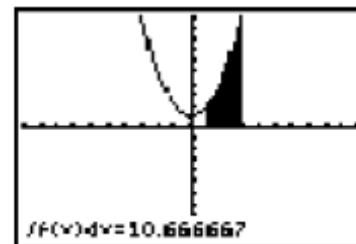
5. Press **EXE**. The function will be graphed, the area under the curve shaded, and the value of the definite integral displayed.



4. Enter the upper bound by pressing **3 ENTER**



5. The area and the solution will be displayed.



THE CASIO ADVANTAGE

- Same functionality, but greater efficiency (fewer keystrokes)
- Easy to use menus: Casio menus do not cover students' work screen
- Cost-conscious: the fx-9750GII is approximately half the price of the comparable TI products

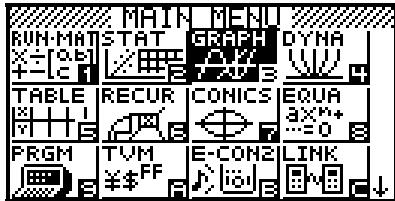
Graphing Inequalities

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

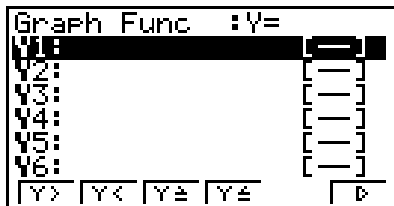
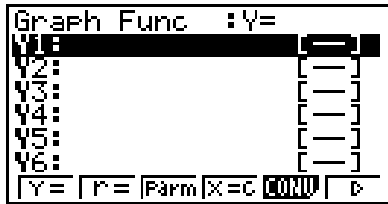
CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
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Graph the intersection of $y \geq (x - 2)^2 - 3$ and $y \leq x - 1$.

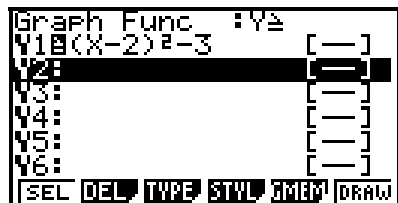
1. From the Main Menu, select the **GRAPH** icon.



2. Press **F3** to select the type of graph. Pressing **F6** will give you more graph choices.



3. Press **F3**, then right arrow, enter $(x - 2)^2 - 3$ and press **EXE** to store.



Graph the intersection of $y \geq (x - 2)^2 - 3$ and $y \leq x - 1$.

Steps to Enter the Equations into the Graph Menu.

1. Go to the Y=Screen and press the **left arrow** twice and then press **ENTER** twice.

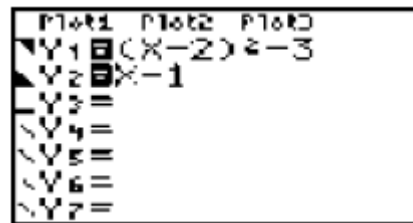
2. Press the **right arrow** twice and enter $(x - 2)^2 - 3$.

3. Press the **ENTER**.

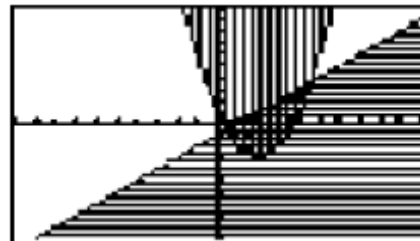
4. Press the **left arrow** twice and **ENTER** three times.

5. Press the **right arrow** twice and enter $x-1$

6. The screen will look like this:



To draw the graph, press the graph key. The graph will look like this:



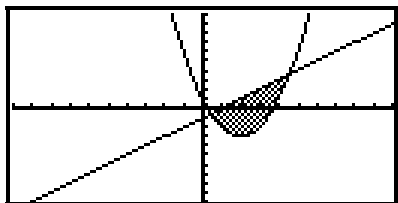
Graphing Inequalities

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83 Plus, TI-84 Plus, & TI-84 SE

4. Repeat the process for your second inequality; press **F3**, **F6**, **F4** and **right arrow**. Enter $x - 1$ and press **EXE** to store.



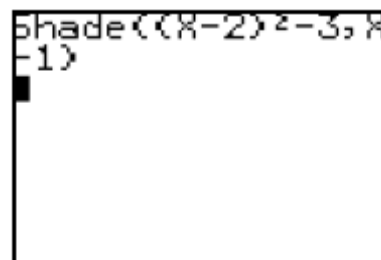
6. To view the graph, press **F6** (**DRAW**).



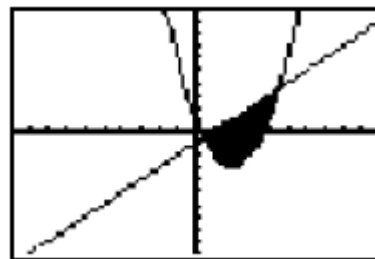
To get the exact diagram as the Casio fx-9750GII, you must either have the Inequality APP loaded or use the **SHADE** function on the TI.

To do this, follow these steps:

1. Clear your Y=entries.
2. Press **2nd** and **DRAW**
3. Press **7**.
4. Enter $((x-2)^2-3, x-1)$



Press **ENTER** and the calculator will display the following:

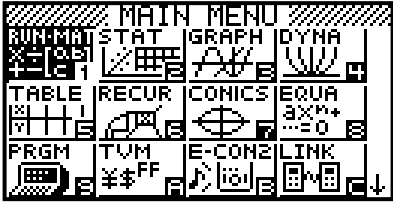
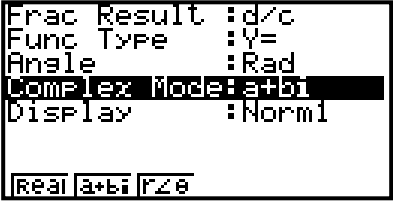
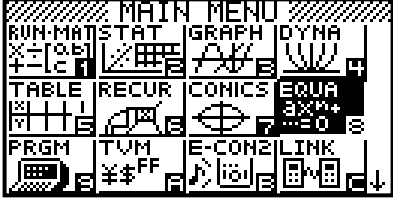
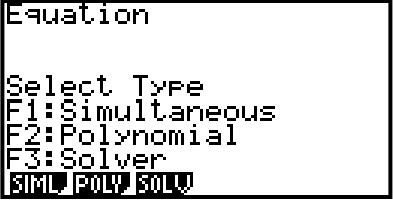



THE CASIO ADVANTAGE

- Built-in functionality: graphing inequalities is native to Casio calculators, whereas TI models may require an add-in application.
- Same functionality, but greater efficiency (fewer keystrokes)
- Improved investigation: Casio inequalities can be Traced, intersection points found, etc.. while TI models use the limited Shade function.
- Cost-conscious: the fx-9750GII is approximately half the price of the comparable TI products

Polynomial Equations with Complex Roots

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
<p>Find all roots (real and complex), of the equation $x^3 - 3x^2 + x - 3 = 0$</p> <hr/> <p>1. From the Main Menu, select the RUN·MAT Icon. Press SHIFT then the MENU button to view the Set Up Menu.</p>  <p>2. Arrow down to the Complex Mode Menu. Press F2 for answers to be displayed in a+bi form.</p>  <p>3. Press the MENU button. From the Main Menu, select the EQUA Icon.</p>  <p>4. Press F2 (Polynomial).</p> 	<p>Find all roots (real and complex), of the equation $x^3 - 3x^2 + x - 3 = 0$</p> <hr/> <p>Before starting the problem, select MODE, press the down arrow six times to get to the row of mode settings for polynomial roots, then press the right arrow once followed by ENTER to force the calculator to display complex roots.</p> <p>1. Press APPS, then ALPHA 8 to quickly jump to the applications starting with "P". Press the down arrow until you find PolySmlt, and press ENTER to run the app.</p> <p>2. Press ENTER again to get into the application. The screen will look like the one below:</p>  <p>3. Press ENTER to run the Poly Root Finder portion of the app.</p> <p>4. Input 3 for the degree of the polynomial, and press ENTER.</p>

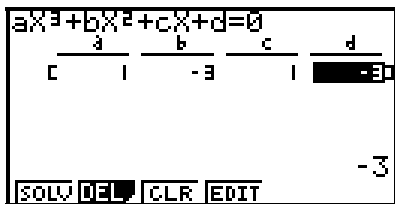
Polynomial Equations with Complex Roots

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

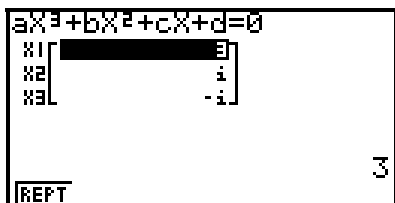
5. Press **F2** to indicate a 3rd degree polynomial.



6. Enter the coefficients and the constant term into the matrix. The screen should look like the one below:



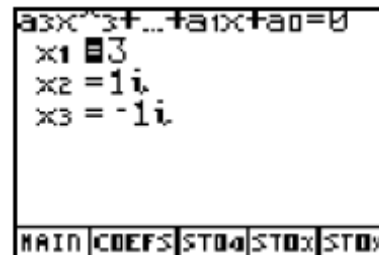
7. Press **F1 (SOLV)**. The resulting screen shows the real and complex roots in matrix format.



5. Enter the coefficients and the constant terms. The screen will look like the one below:



6. Press **F5 (SOLVE)**. The real and complex roots will be shown as in the screenshot below:



THE CASIO ADVANTAGE

- Built-in functionality: Polynomial solving is native to Casio calculators, TI models require an add-in application
- Same functionality, but greater efficiency (fewer keystrokes)
- Cost-conscious: the fx-9750GII is approximately half the price of the comparable TI products

Table Entries

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

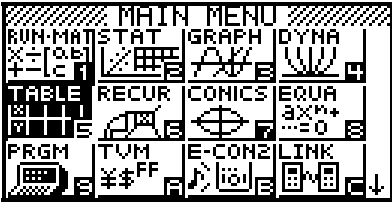
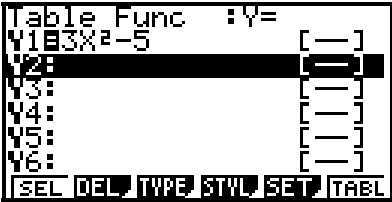
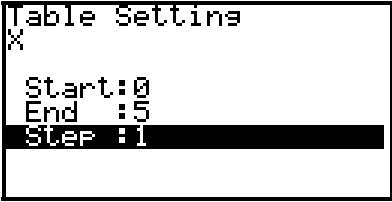


CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
<p>1. From the Main Menu, select the TABLE icon.</p>  <p>2. Enter the function you wish to use. Here we will use $y = 3x^2 - 5$.</p>  <p>3. The table is preset for the x-values to start at 1 and end at 5. To change the range for the x-values, press F5 (SET). Here we will change the starting x-value to 0 and leave the ending value at 5. Press 0 EXE to make the Start value 0. The preset table increment is 1.</p> 	<p>1. Enter your function in $Y=$</p>  <p>2. To set the Table Range, press 2nd-WINDOW (TBLSET). Press 5 ENTER to make the first row of the table show an X-value of 5.</p>  <p>3. If we press 2nd-GRAPH (TABLE) with the Independent and Dependent variable settings on "Auto", as they are now, we will get a fixed table based on our Table Range from step 2. If we wished to investigate what was happening at $X = 1.5$, for instance, we would have to go back and define new table settings.</p>

Table Entries

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

4. Press **EXIT**, then **F6 (TABL)** to display your table. This table only contains the values covered by your Table Range.

X	Y1
0	-5
1	-2
2	7
3	22

FORM DEL ROW EDIT G·CON G·FLT 0

X	Y1
2	7
3	22
4	43
5	70

FORM DEL ROW EDIT G·CON G·FLT 5

5. You can enter any x-value you choose anywhere in the x-column, press **EXE** and the corresponding y-value will be displayed. To find the value of y when $x = -9$, highlight an x-value then press **-9 EXE**.

X	Y1
-9	238
1	-2
2	7
3	22

FORM DEL ROW EDIT G·CON G·FLT -9

6. New values can continue to be inserted without overwriting existing values. Press the **down arrow** once so that $X = 1$ is highlighted, and then press **F3 (ROW)**.

X	Y1
-9	238
1	-2
2	7
3	22

DEL INS ADD 1

X	Y1
0	-5
1	-2
2	7
3	22
4	43
5	70
6	103

X=0

(on AUTO)

X	Y1
3.25	26.688
.66667	-3.667
-9	238

X=

(ASK setting)

5. Press **2nd-GRAPH (TABLE)** to display the table. Now we have the option to enter values for X, but we do not have any automatically-generated table values to use as guidelines.”

(Note: the table also displays all fractions in decimal form.)

Table Entries

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

7. Press **F2 (INS)** to create a duplicate of the current row, inserted above it. If we wanted to find the value of y when $x = \frac{2}{3}$, press **2 (a $\frac{b}{c}$) 3 EXE**. Notice, the table itself shows the decimal equivalent of $\frac{2}{3}$, but the fractional form is still displayed in the lower right corner of the screen (in lowest terms).

X	Y1
-9	238
0.6666	-3.6666

2/3

DEL INS ADD

THE CASIO ADVANTAGE

- Increased functionality: Hybrid table values are both pre-set and user-defined
- Fraction treatment: User-entered fractions are shown in both original and equivalent forms
- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI models.

Table Features

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

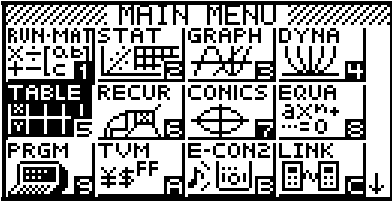
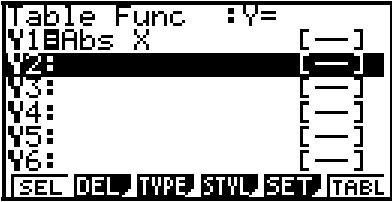
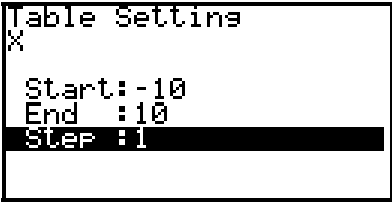
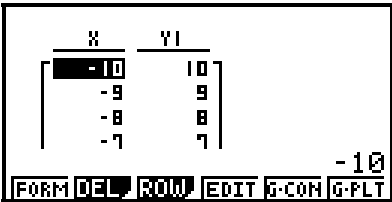
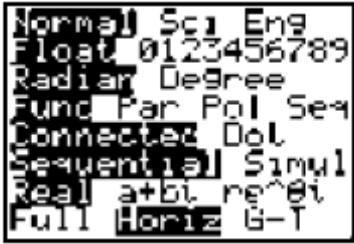
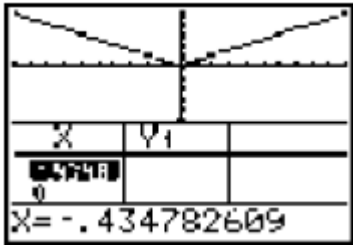
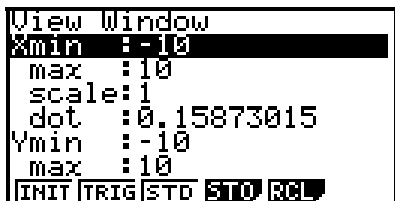
CASIO GRAPHING CALCULATORS	TI GRAPHING CALCULATORS
<p>1. From the Main Menu, select the TABLE Icon.</p>  <p>2. Enter the function you wish to use. We will use the absolute value of x. To enter the absolute value of x, press the OPTN key, F5 (NUM), then F1 (Abs). To obtain the x, press the X,θ,T key.</p>  <p>3. Press F5 (SET) to set your desired Table Range.</p>  <p>4. Press EXIT and then F6 to display the table.</p> 	<p>1. Press Y=. Into Y1, enter the function for which you wish to generate a table of values.</p> <p>2. Press 2nd-WINDOW (TBLSET) to enter Table Setup. Type -3 ENTER for the TblStart value, then make sure $\Delta Tbl = 1$ and both "Indpnt" and "Depend" are set to Auto."</p> <p>3. Press 2nd-GRAPH (TABLE) to view the table for your function. Use the arrow keys to move around the table</p> <p>4. Press MODE, then the down arrow 7 times, then the right arrow. The cursor will be blinking over the HORIZ window setting. Press ENTER to select it.</p>  <p>5. Now press 2nd-GRAPH (TABLE) again. The screen shows a horizontal split-screen mode in which the graph of the function appears in the upper half of the window, and the table in the lower half.</p> 

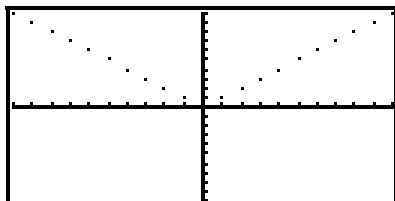
Table Features

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

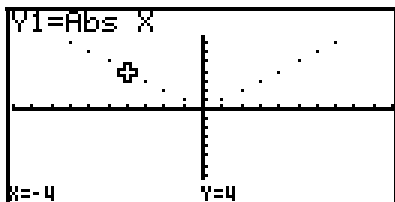
5. Set a reasonable viewing window using **SHIFT F3 (V-Window)**, this can be done in advance, and display the table again.



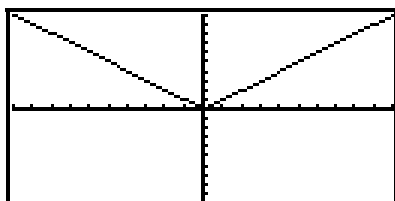
6. Press **F6 (G-PLT)** to display a scatter plot of the discrete points you placed in the table.



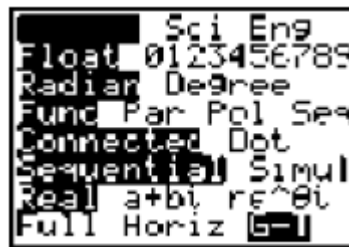
7. You can trace to view to points on the screen using the **TRACE** feature on the keyboard.



8. You can display a full graph of the function by pressing the **F5 (G-con)** from the table display screen.



6. Press **MODE** again, then the **down arrow** 7 times, then the **right arrow** twice. The cursor will be blinking over the **G-T** window setting. Press **ENTER** to select it.



7. This time, when you press **2nd-GRAPH (TABLE)**, the screen is split left-to-right. At first, the table shown on the right half of the screen has user-defined values:

8. However, if you press **TRACE**, the table values all change to reflect the pixel spacing defined by the graph. The user has no control over the table.

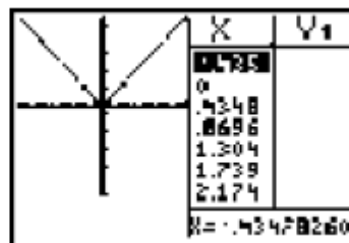


Table Features

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

9. You can also insert additional rows by pressing **F3 (Row)**, **F2 (INS)**, it will copy the row you are on then you can change the value to suit your needs.

Variable	: Range
Graph Func	: On
Dual Screen	: T+G
Frac Result	: d/c
Simul Graph	: Off
Derivative	: Off
Background	: None
T+G Off	

10. You also have the option of using Parametric or Polar forms in the table mode right from the same location by using the **F3 (TYPE)** key from the function screen.

Y1=Abs X		
	X	Y1
	-10	10
	-9	9
	-8	8
	-7	7

FORM DEL ROW EDIT G·CON G·FLT

THE CASIO ADVANTAGE

- Increased functionality: Casio fx-9750G II has many more table options
- Robust dual-screen mode: Table remains editable throughout
- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI products

Working with Fractions

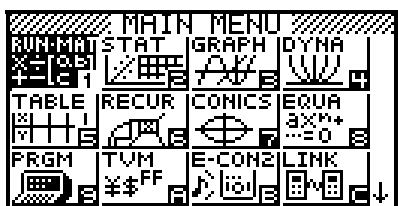
CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

CASIO GRAPHING CALCULATORS

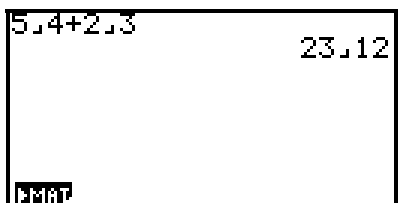
Problem:

$\frac{5}{4} + \frac{2}{3}$. Express your answer as a mixed number, improper fraction, and decimal.

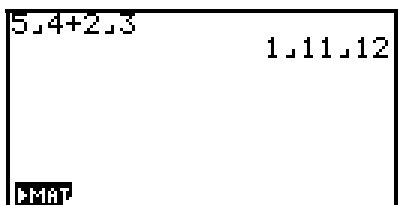
1. From the Main Menu, select the RUN·MAT Icon.



2. To enter fractions, use the $(a \frac{b}{c})$ key to represent the fraction bar. For instance, the fraction $\frac{5}{4}$ would be entered using the keystrokes: **5** $(a \frac{b}{c})$ **4**.



3. By factory default, the fx-9750GII displays answers as improper fractions. To convert the result into a mixed number, press **SHIFT-F⇔D**

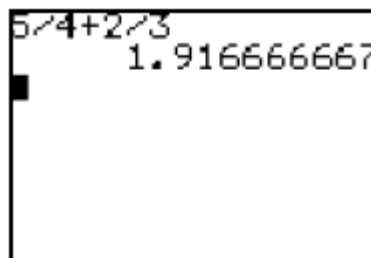


TI GRAPHING CALCULATORS

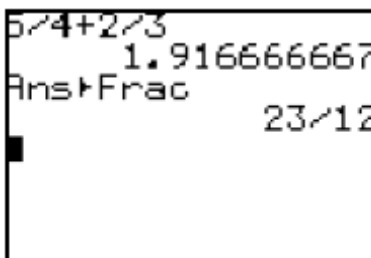
Problem:

$\frac{5}{4} + \frac{2}{3}$. Express your answer as a mixed number, improper fraction, and decimal.

1. On the Home screen, type "5/4 + 2/3" and press **ENTER**. The calculator displays the decimal approximation of the answer:



2. To convert the answer to an improper fraction, press **MATH**, then **1 (►Frac)**, then **ENTER**.

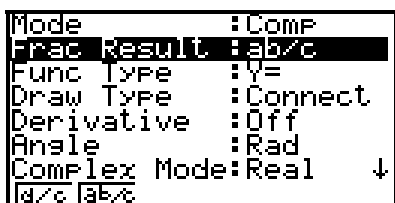


(Note: The TI graphing calculators cannot display fractions as mixed numbers.)

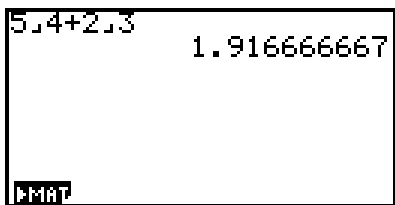
Working with Fractions

CALCULATORS: Casio: fx-9750GII
Texas Instruments: TI-83, TI-83 Plus & TI-84, TI-84 Plus

4. We can change the default fraction output by pressing **SHIFT-MENU (SET UP)**, then the **down arrow**, then **F2** ($a\frac{b}{c}$). This will cause all future results to be displayed as mixed numbers.



5. Press **EXIT** to return to the **RUN·MAT** screen. To convert the result to a decimal, press **F↔D**.



THE CASIO ADVANTAGE

- Mixed number fraction and decimal conversion keys available directly on the keyboard.
- Increased functionality: support for mixed numbers and quick conversion
- Cost-conscious: the fx-9750GII is approximately half the price of comparable TI products