

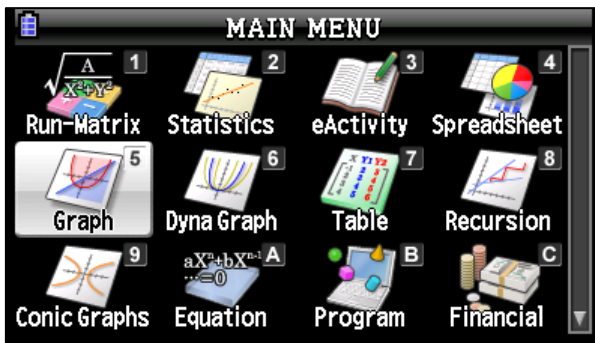
Activity 3 - Finding the Max and/or Min of a Function

$$Y1 = x^3 - 4x^2 + 2x + 7$$

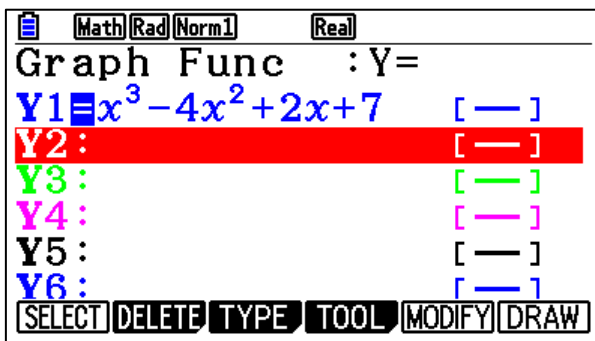
Domain: [-10, 10] and Range: [-10, 10]

CASIO (PRIZM)

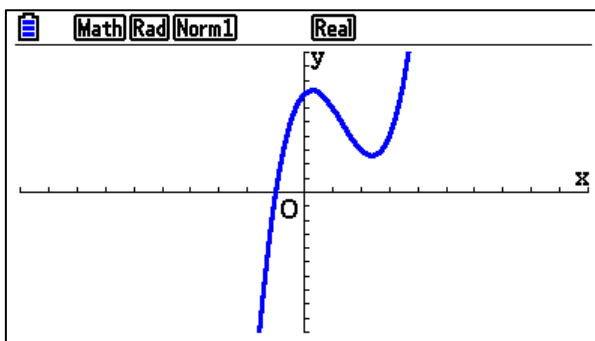
1. From the Main Menu (MENU), select the **GRAPH** icon by pressing **[5]**.



2. Enter the function into **Y1=** and press **[EXE]** to store the function.

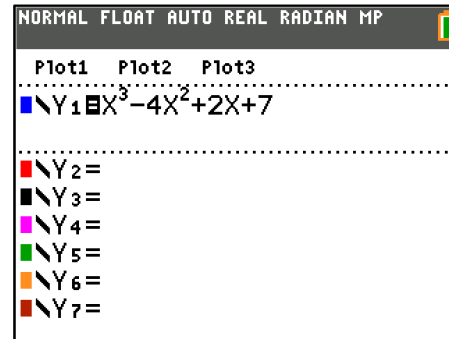


3. Press **[F6]** (DRAW) to view the graph of the function.

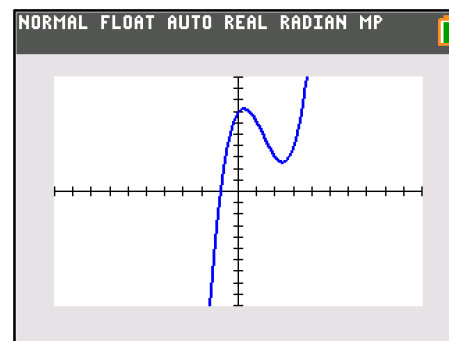


TEXAS INSTRUMENTS (84 PLUS CE)

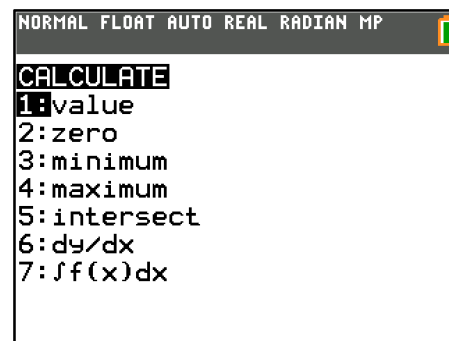
1. Press **[Y=]** and enter the function into **Y1**.



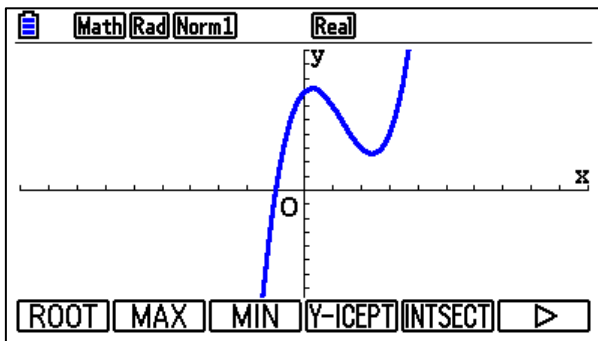
2. Press **[GRAPH]** to view the graph of the function.



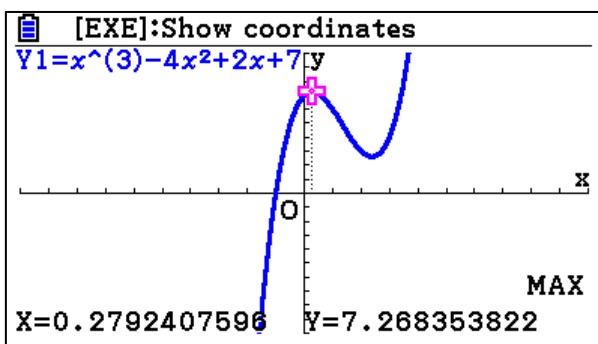
3. Press **[2nd][TRACE]** (calc) - be sure to remember the shape of the graph to know whether to choose minimum or maximum!



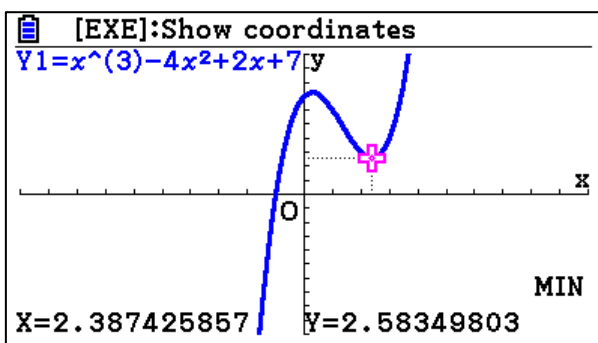
4. Press **F5** (G-Solv).



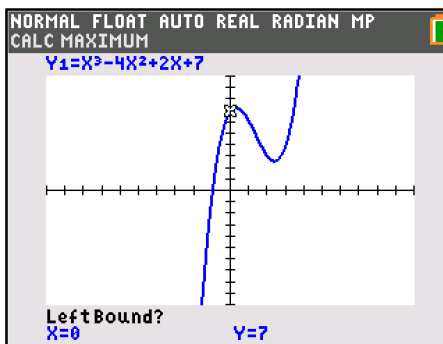
5. Press **F2** (MAX) or **F3** (MIN) depending on the function. In this example there are both, so press **F2** (MAX) first. The **MAXIMUM** value is displayed.



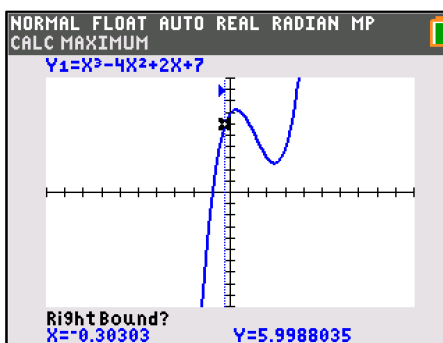
6. To see the **MINIMUM**, press **F5** (G-Solv), then **F3** (MIN). The **MINIMUM** value is displayed.



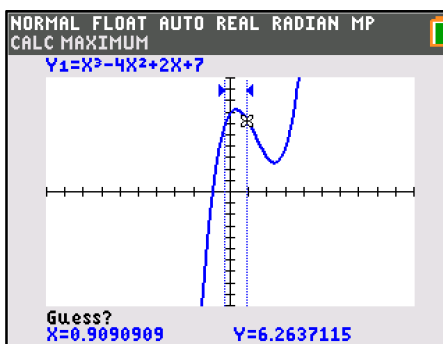
4. Press either **3** (minimum) or **4** (maximum) depending on the function. In this example there are both, so press **4** (maximum) first.



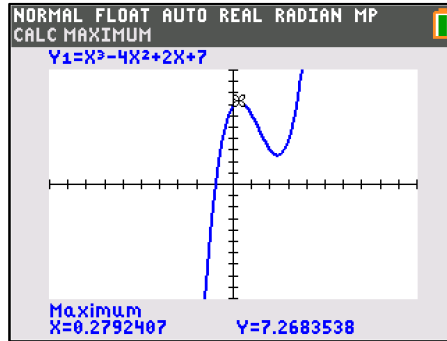
5. Use the arrow keys (**←****→**) to move the cursor to the left of the maximum point and press **ENTER**.



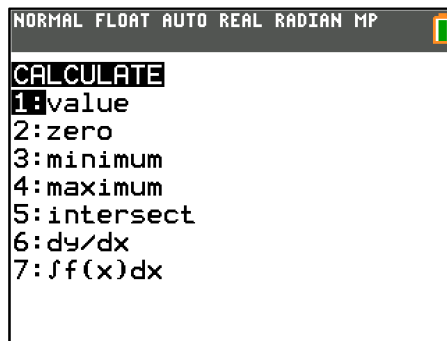
6. Use the arrow keys (**←****→**) to move the cursor to the right of the maximum point and press **ENTER**.



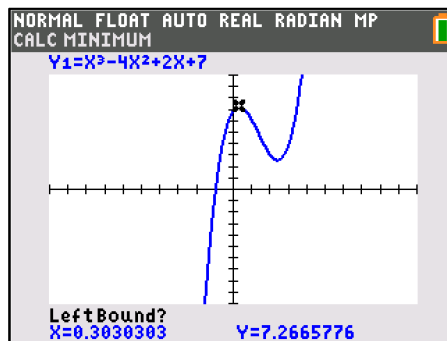
7. Use the arrow keys (\leftarrow \rightarrow) to move the cursor as close to the maximum and press $\boxed{\text{ENTER}}$. Or just press $\boxed{\text{ENTER}}$ to 'guess' and display the **MAXIMUM**.



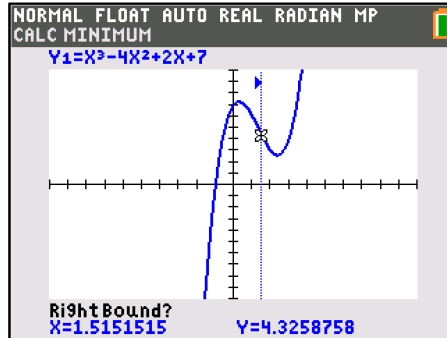
8. To find the **MINIMUM** (if there is one), repeat Steps 3 - 7. Press $\boxed{2\text{nd}} \boxed{\text{TRACE}}$ (calc).



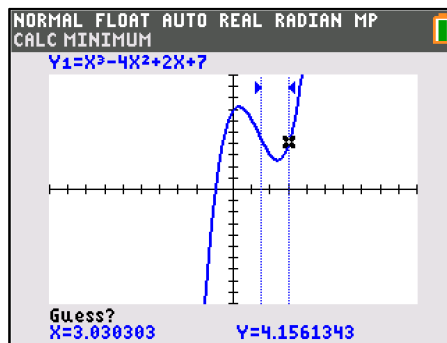
9. Press $\boxed{3}$ (minimum).



10. Use the arrow keys (\leftarrow \rightarrow) to move the cursor to the left of the minimum point and press **ENTER**.



11. Use the arrow keys (\leftarrow \rightarrow) to move the cursor to the right of the minimum point and press **ENTER**.



12. Press **ENTER** to 'guess' and display the minimum.

