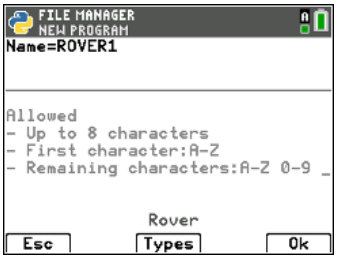
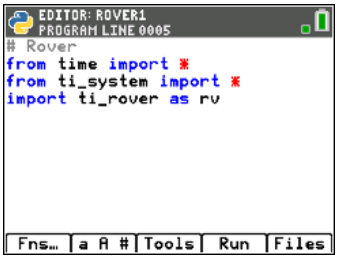
QUICK START GUIDE

The TI-Innovator™ Rover and TI-84 Plus CE Python Graphing Calculator

Begin a new Python program:

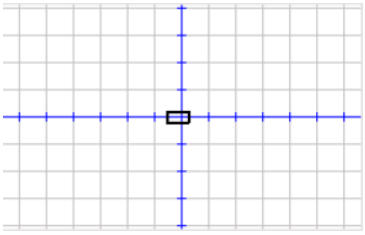
- Press **[zoom]** to access the **Type** softkey to select the **Rover** template and enter the program name. (Note: The name of this program is “Rover1.”)
- Press **[graph]** to select the **OK** softkey.





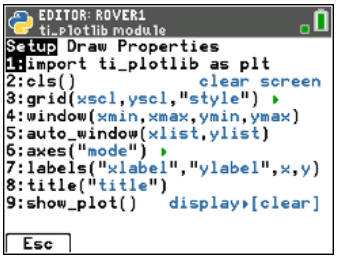
Rover and the Cartesian coordinate plane:

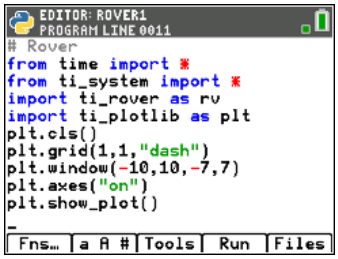
- Rover has a built-in coordinate system just like a Cartesian graphing system.
- When you **import ti_rover as rv**, Rover’s position on the coordinate grid is set to (0,0) and its heading is 0 degrees (pointing toward the positive x-axis or east on a map).
- The default coordinate and driving unit is 10 cm.



Turn on the on-screen coordinate plane:

- Select the following:
  - **[math]> 5: ti_plotLib > 1: import ti_plotlib as plt**
  - **[math]> 5: ti_plotLib > 2: cls()**
  - **[math]> 5: ti_plotLib > 3: grid(1,1,"dash")**
  - **[math]> 5: ti_plotLib > 4: window(-10,10,-7,7)**
  - **[math]> 5: ti_plotLib > 6: axes("on")**





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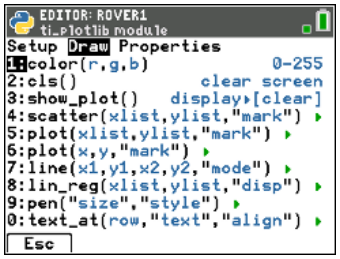
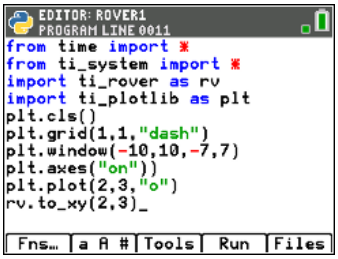
Make Rover drive to a point in the coordinate plane:

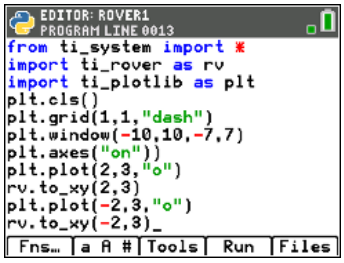
From the origin, move Rover to a point in the first quadrant on the calculator and the surface where Rover moves, such as (2,3):





- » Select **[math] >5: ti_plotlib > Draw > 6: plot(x, y, “mark”)**
- » The mark selects how you want the point to appear on the calculator screen.
- » Enter the x and y coordinates as shown.
- » Select **[math] > 7: ti_rover > 9: to_xy(x,y)**
- » Enter the same coordinates as above.
- » Connect the calculator and Rover, then turn on the Rover.
- » Press **[trace]** to access the **Run** softkey and run the program.

Make Rover create a reflection in the y-axis:



- » Press **[enter]** to create a new program row.
- » Select **[math] > 5: ti_plotlib > Draw > 6: plot(x, y, “mark”)**
- » Enter the x and y coordinates which creates a reflection in the y-axis of the previously entered point.
- » Select **[math] > 7: ti_rover > 9: to_xy(x,y)**
- » Enter the same x and y coordinates as above.
- » Connect the calculator and Rover, then turn on Rover.
- » Press **[trace]** to access the **Run** softkey and run the program.
- » Press **[trace]** again to access the **Edit** softkey and edit the original program.

Sample actions:

- » Move Rover to a point in each quadrant.
- » After plotting a point, create other transformations of the point such as:
  - » Reflection in the x-axis.
  - » Translation of x and y coordinates.