

Activity 10 - Graphing Two Inequalities with Their Intersection

$$Y1 > 3x + 2$$

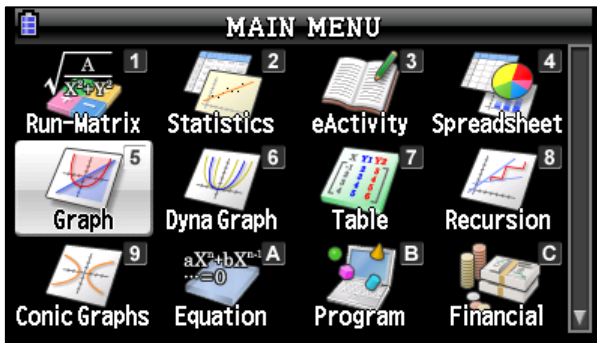
$$Y2 \geq -x - 2$$

CASIO Domain: [-6.3, 6.3] and Range: [-3.1, 3.1] (INITIAL Setting)

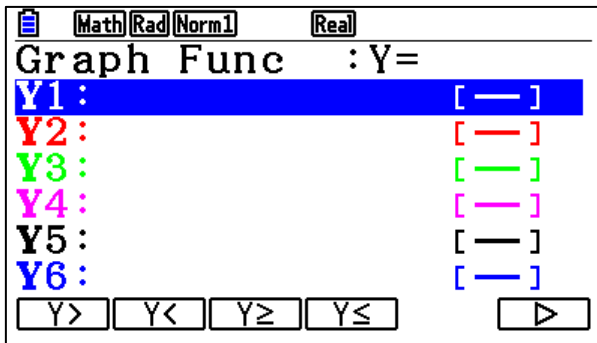
TI Domain: [-10, 10] and Range: [-10, 10]

CASIO (PRIZM)

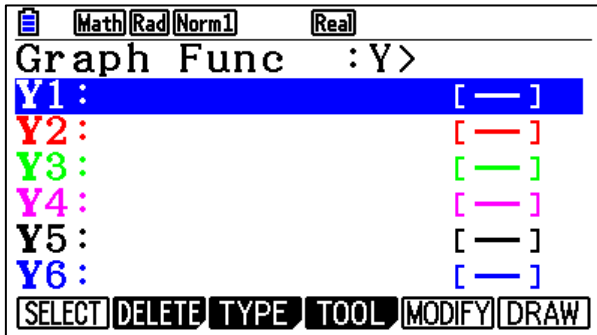
1. From the Main Menu (MENU), select the **GRAPH** icon by pressing **[5]**.



2. Press **[F3]** (TYPE), then **[F6]** (▷) to display more options.



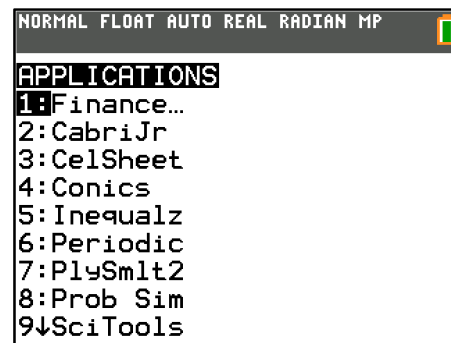
3. Press **[F1]** (>), **[F2]** (<), **[F3]** (≥), **[F4]** (≤) depending on which inequality is desired.



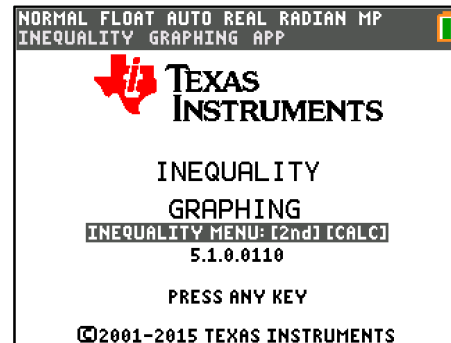
TEXAS INSTRUMENTS (84 PLUS CE)

OPTION 1 - This option displays the correct lines (dotted or solid) for an inequality.

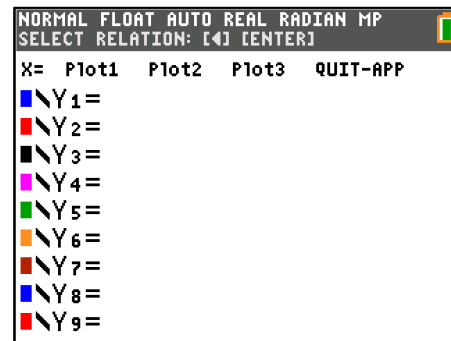
1. From the initial screen, press **[APPS]**.



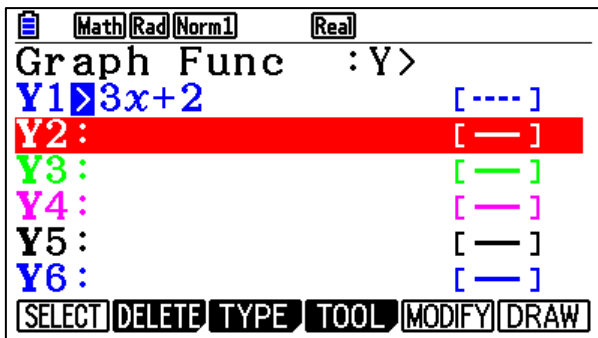
2. Press **[5]** (Inequalz).



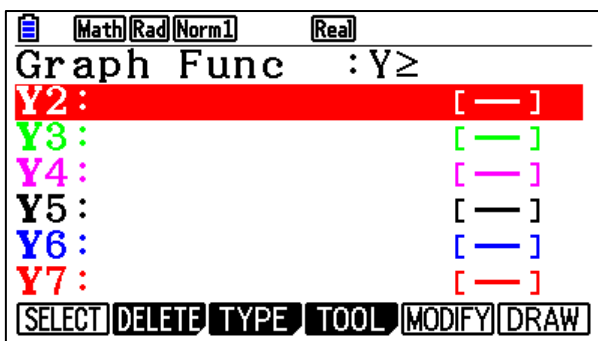
3. Press **[Y=]**.



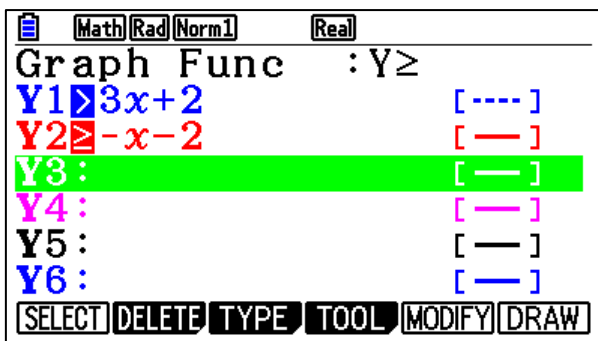
4. Enter the inequality equation and press **EXE**. The inequality symbol is displayed next to **Y1**, along with the correct line type.



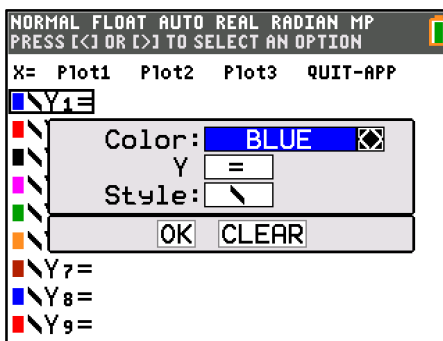
5. To enter the next inequality, press **F3** (TYPE) **F6** (\triangleright), then select the type of inequality desired.



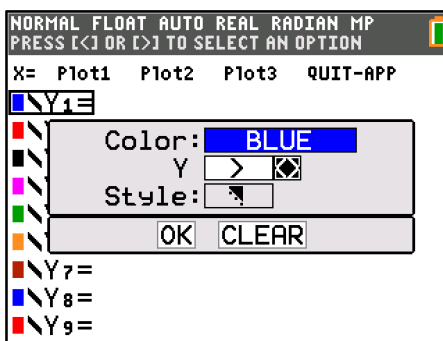
6. Enter the second inequality equation into **Y2** and press **EXE**. The inequality symbol is displayed next to **Y2**, along with the correct line type. Press \uparrow \uparrow to see both inequalities.



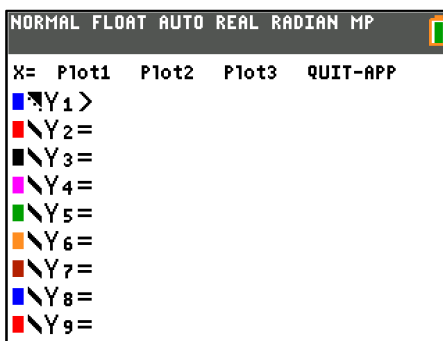
4. Press \square for a blinking box to appear around **Y1** and press **ENTER**.



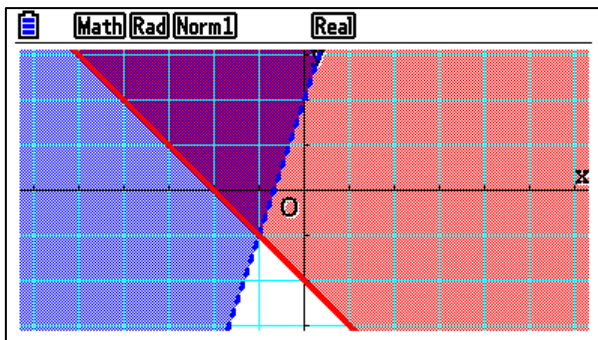
5. Press \square to highlight **Y** and press \square until the desired inequality is displayed.



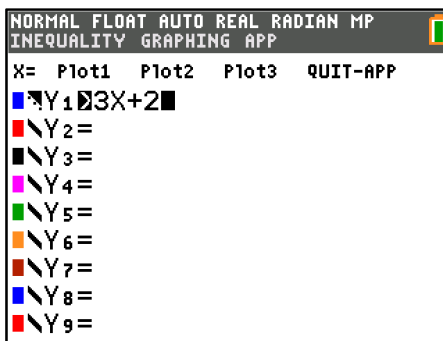
6. Press \square to highlight **OK** and press **ENTER**.



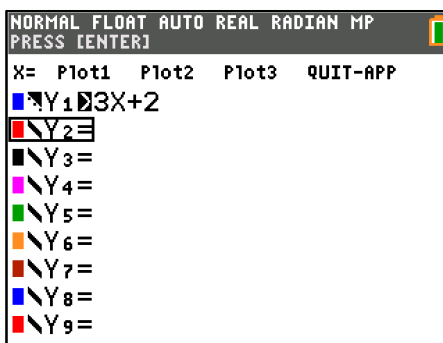
7. Press **F6** (DRAW) to view the graph of both inequalities and the intersection areas.



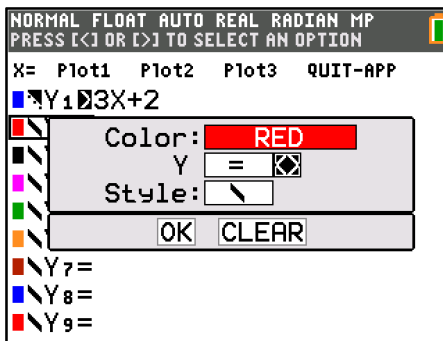
7. Press **□** twice and enter the inequality.



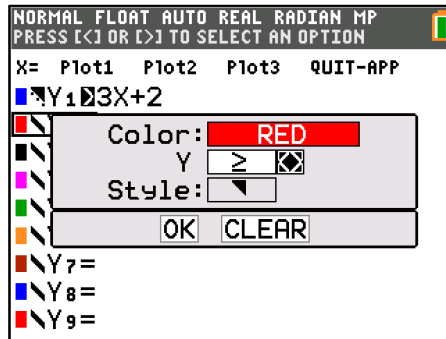
8. Arrow down to **Y2** and press **□** twice to display a blinking box around **Y2**.



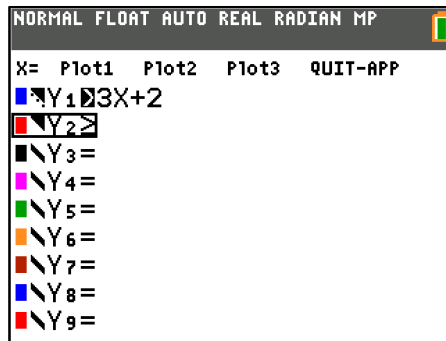
9. Press **ENTER** and arrow down to **Y**.



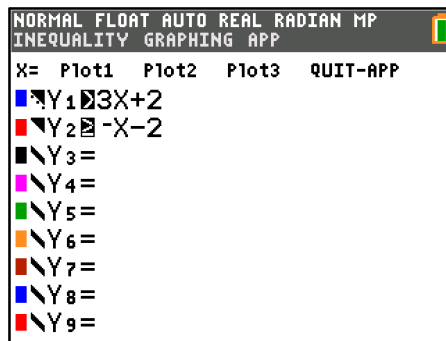
10. Press \square until the desired inequality is displayed.



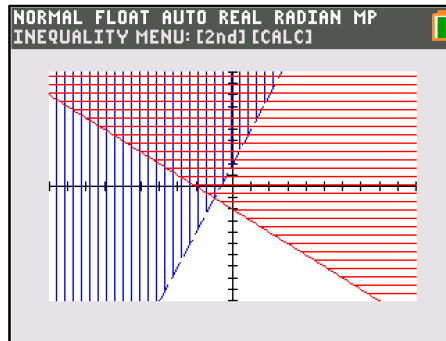
11. Press \square to highlight **OK** and press \square .



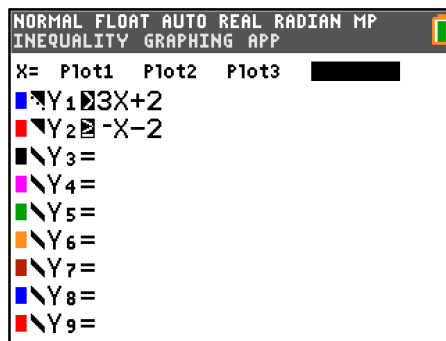
12. Press \square twice and enter the inequality.



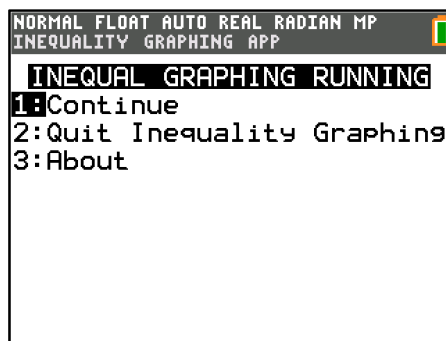
13. Press **[GRAPH]** to view the graph of both inequalities and the intersection areas.



14. To quit the app, press **[Y=]** and use the arrow keys to highlight **QUIT-APP** and press **[ENTER]**.

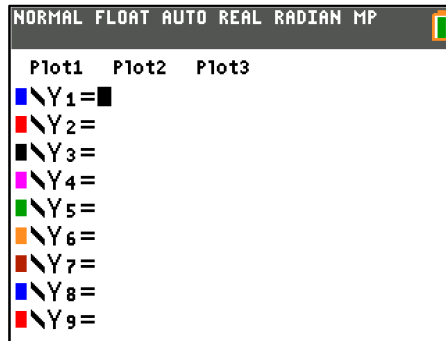


15. Press **[2]** (2:Quit Inequality Graphing).

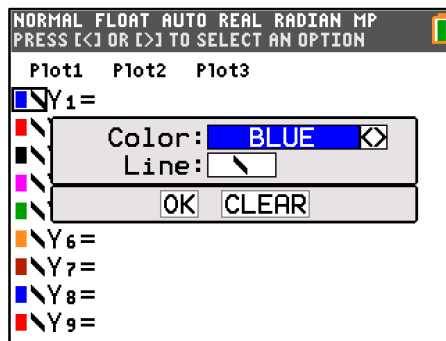
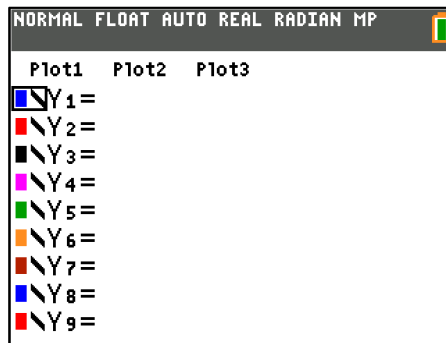


OPTION 2 - Faster, however it does NOT show the inequalities in the function and users can only choose dotted or solid OR shaded, but not both. So the graph of the inequality will not be accurate if it's a $>$ or $<$ inequality.

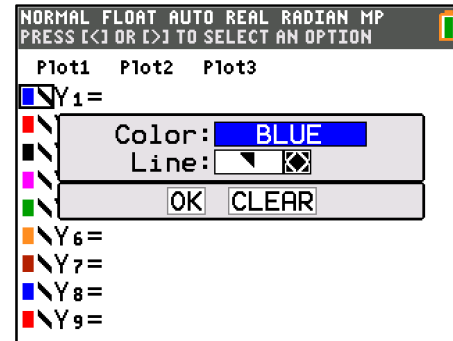
1. From the initial screen, press $\boxed{Y=}$.



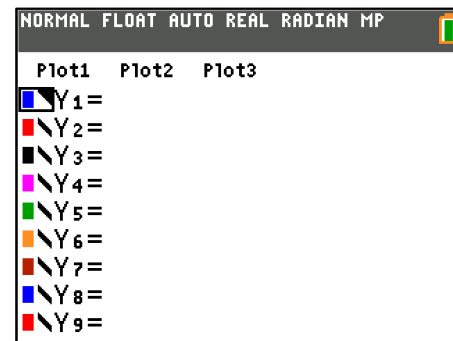
2. In Y_1 , press $\boxed{\downarrow}$ twice to highlight the Color & Line Choice and press $\boxed{\text{ENTER}}$.



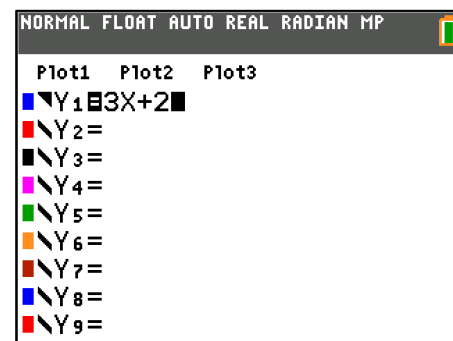
3. Press \leftarrow to highlight **Line** and press \rightarrow to select the desired line type or shading depending on the inequality. This needs to be determined ahead of time and this option does not allow both line type and shading. For this example, shading is chosen.



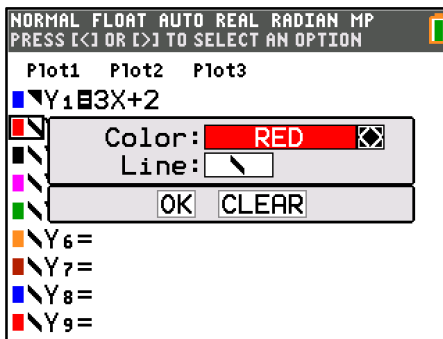
4. Press \leftarrow to highlight **OK** and press ENTER .



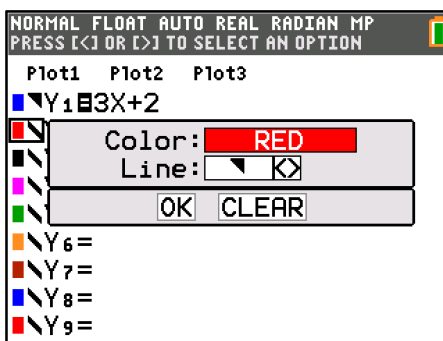
5. Press \rightarrow twice and enter the inequality.



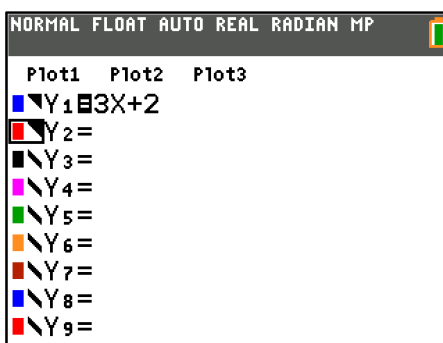
6. Arrow down to **Y2** and press \downarrow twice to highlight the Color & Line Choice and press **ENTER**.



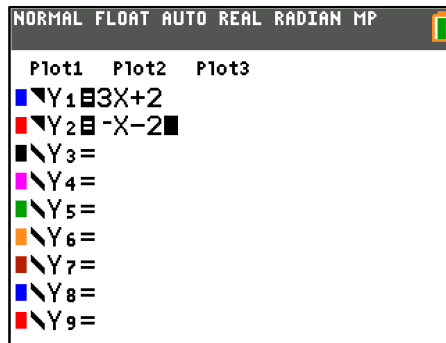
7. Press \downarrow to highlight **Line** and press \rightarrow to select the desired line type or shading depending on the inequality.



8. Press \downarrow to highlight **OK** and press **ENTER**.



9. Press \square twice and enter the inequality.



10. Press \square to view the graph of the inequalities. *Note: If a dotted line was needed (i.e. for $>$ or $<$), this WILL NOT appear when inequalities are done with this method. In this example, the blue inequality should have a dotted line.*

