

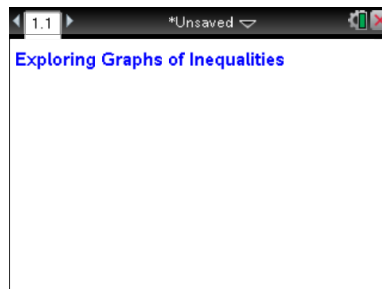


Overview


In this activity, you will test ordered pairs to determine if they are part of the solution set to an inequality.





Materials

- TI-Nspire™ handheld or computer technology
- Exploring_Graphs_of_Inequalities.tns




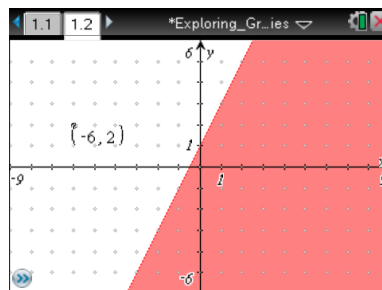
Move the Point

Step 1: Move the cursor until  and *point* appear around the point on the grid.

Step 2: To grab that point, press  . The  will change to .

Step 3: Use the Touchpad or Clickpad to move the point around the screen. Notice that the coordinates change as you move the point.

Step 4: Press  to stop moving the point.





Test Ordered Pairs


Step 1: Given the inequality $y < 2x + 1$, move the point as indicated in Column 1 of the table on the next page of this worksheet.


Step 2: Complete Columns 2, 3, and 4 on this worksheet.



Change the Inequality Sign

Step 1: Show the entry line by pressing  .

Step 2: Press  to display the current relation.

Step 3: Press  until the cursor is between $<$ and 2

Step 4: Press  to erase the $<$. A menu will pop up showing inequality options.

Step 5: Press the  until the \geq symbol is highlighted. Press .

Now complete columns 5 and 6 on this worksheet.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location of the Point	Coordinates of the Point (x, y)	Substitute the coordinates in the inequality. $y < 2x + 1$ True or False?	What observations can you make about the point in relation to the shaded area of the graph?	Substitute the coordinates in the inequality. $y \geq 2x + 1$ True or False?	What observations can you make about the point in relation to the shaded area of the graph?
Move the point to Quadrant I	(1,5)				
Move the point to Quadrant II	(-3,2)				
Move the point to Quadrant III	(-1,-2)				
Move the point to Quadrant IV	(3,-1)				
Move to a location on the line $y = 2x + 1$	(1,3)				