

Graphing Linear Inequalities

Knowing how to graph linear equations in 2 variables translates to graphing linear inequalities. We start the same way, hopefully, graphing by inspection.

That is, we plot the boundary lines of the inequality using either

Slope Intercept; $y = mx + b$ or **General Form** $Ax + By = C$

1. Plot the y_{int} , (b)
2. From b , use m to find 2nd pt
3. Connect pts

1. Let $x = 0$, find y_{int}
2. Let $y = 0$, find x_{int}
3. Connect intercepts

If the inequality sign contains an equality (\geq ,) graph a solid line. If the inequality does **not** contain an equality ($>$), graph a dotted line.

After graphing the boundary line, pick a convenient point on either side of the line (like the origin) and substitute those values into the inequality. If that ordered pair makes the statement true, shade in that side of the line. If it does not, shade in the other side of the line.

