

# Graphing Linear Inequalities by Inspection

Plot the boundary lines using either

**Slope Intercept;  $y = mx + b$**

1. Plot  $y_{\text{int}}$  ( $b$ )
2. From  $b$ , use  $m$  to find 2<sup>nd</sup> point
3. Connect points

**General;  $Ax + By = C$**

1. Let  $x = 0$  to find  $y_{\text{int}}$
2. Let  $y = 0$  to find  $x_{\text{int}}$
3. Connect points  
\* slope is  $-A/B$

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

If  $+y$  is greater than – shade **ABOVE** the line.  
If  $+y$  is less than – shade **BELOW** the line

**Graph the following linear inequalities**

**Use  $y = mx + b$**

1.  $y > 2x + 3$

3.  $y \geq 4x - 2$

5.  $y < \frac{2}{5}x + 3$

7.  $y \leq -\frac{3}{4}x + 1$

9.  $y > -3x + 6$

**Use  $Ax + By = C$**

2.  $3x + 2y > 6$

4.  $4x - 3y \geq 12$

6.  $5x - 2y < 10$

8.  $x + y \leq 3$

10.  $3x + y \geq 6$