Name _____ Class _____ Date _____

Reteaching 2-7

Two-Variable Inequalities

OBJECTIVE: Graphing inequalities with two variables

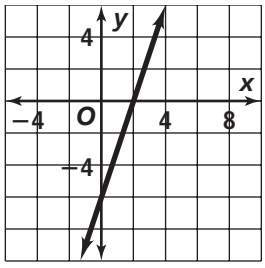
MATERIALS: Highlighting marker

Example

Graph the inequality $6x - 2y \leq 12$.

$6x - 2y \leq 12$

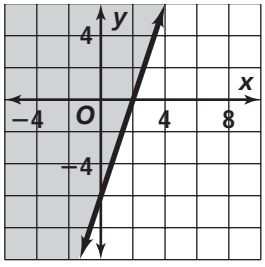
$y \geq 3x - 6$ ← **To graph the boundary line, write the inequality in slope-intercept form as if it were an equation.**



← **The boundary line is solid if the inequality contains $\leq$ or $\geq$. The boundary line is dashed if the inequality contains $<$ or $>$. Graph the boundary line $y = 3x - 6$ as a solid line.**

$0 \geq 3(0) - 6$ ← **Since the boundary line does not contain the origin, substitute the point (0, 0) into the inequality.**

$0 \geq -6$ ← **Simplify. The resulting inequality is true.**



← **Use your highlighting marker to shade the region that contains the origin. If the resulting inequality were false, then you would shade the region that does not contain the origin.**

Exercises

Graph each inequality.

1. $y > 2x$

2. $x + y < 4$

3. $y < x + 1$

4. $y > x - 2$

5. $3x + 4y \leq 12$

6. $2y - 3x > 6$

7. $3x - 2 \leq 5x + y$

8. $x < -4$

9. $y \geq 5$

10. $x + 2y \geq 4$

11. $x + y < x + 2$

12. $3x - 3y < 3$

13. $x - 1 \geq 0$

14. $2y \leq 3$

15. $3x > 2 + y$