

Graphing a Linear Inequality in the Plane: Problem Type 2

• Example 1

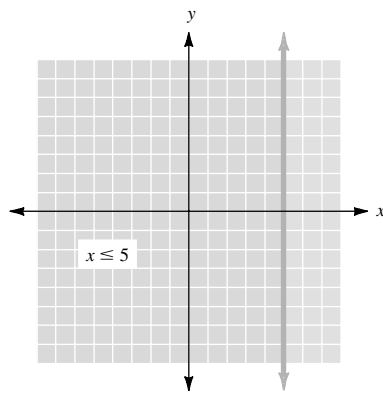
Graph $x \leq 5$.

The boundary line is $x = 5$. Its graph is a solid line because equality is included. Using $(0, 0)$ as a test point, we substitute 0 for x with the result

$$0 \leq 5$$

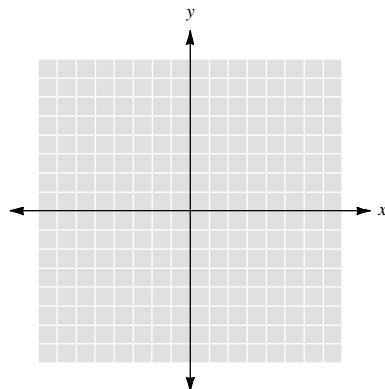
Since the inequality is true for the test point, we shade the half plane containing the origin.

If the correct half plane is obvious, you may not need to use a test point. Did you know without testing which half plane to shade in this example?



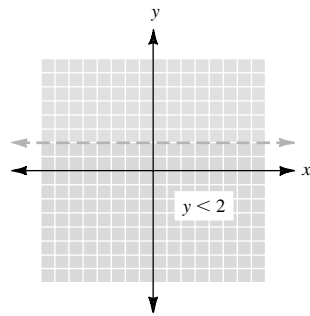
• • • CHECK YOURSELF 1

Graph the inequality $y < 2$.



● ● ● CHECK YOURSELF ANSWER

1.



3.20 Exercises

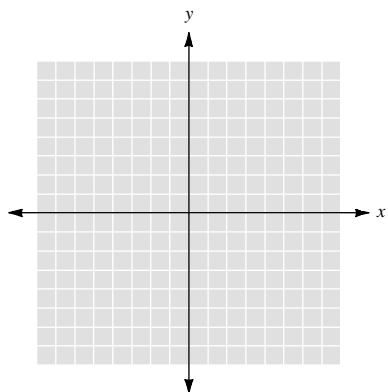
Name _____

Section _____

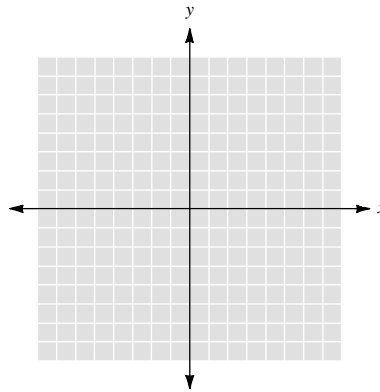
Date _____

Graph each inequality.

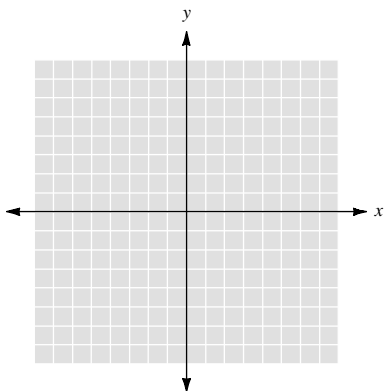
1. $x \leq 3$



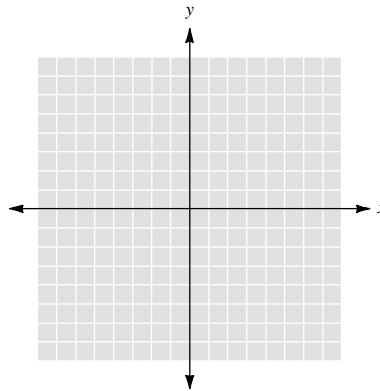
2. $y > 3$



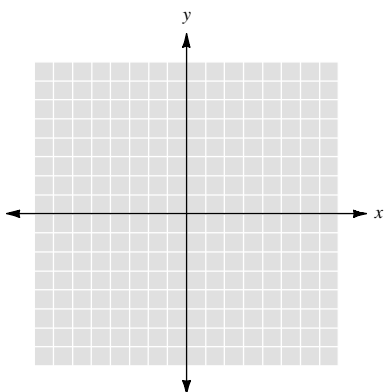
3. $y < -4$



4. $x \geq -2$



5. $x > 3$



6. $y \leq 2$

