

# 3.19

## Graphing a Linear Inequality in the Plane: Problem Type 2

### • Example 1

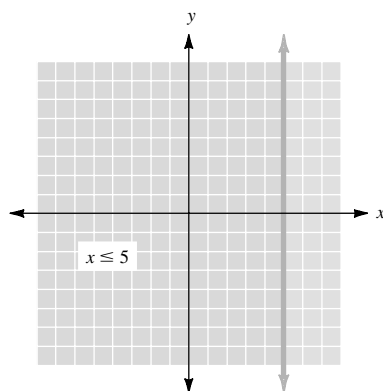
Graph  $x \leq 5$ .

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

$$0 \leq 5$$

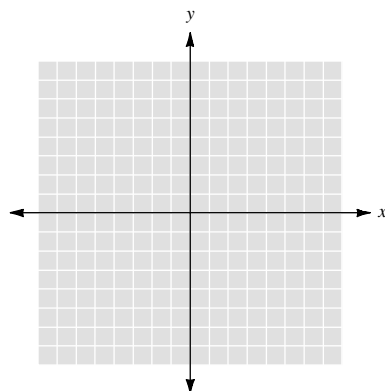
Since the inequality is true for the test point, we shade the half plane containing the origin.

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?



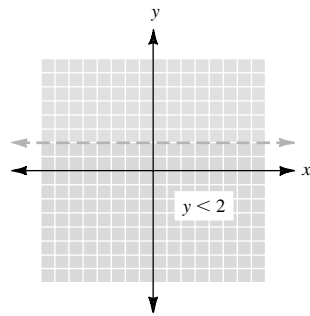
### • • • CHECK YOURSELF 1

Graph the inequality  $y < 2$ .



● ● ● CHECK YOURSELF ANSWER

1.



# 3.19 Exercises

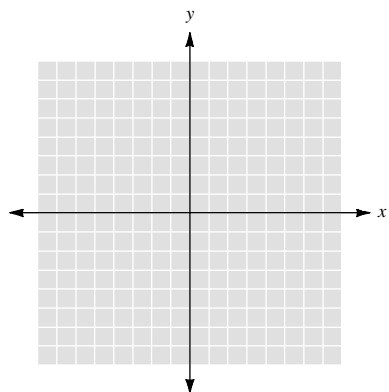
Name \_\_\_\_\_

Section \_\_\_\_\_

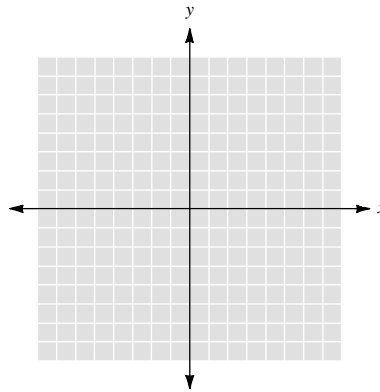
Date \_\_\_\_\_

Graph each inequality.

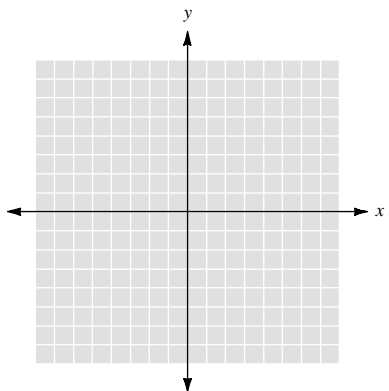
1.  $x \leq 3$



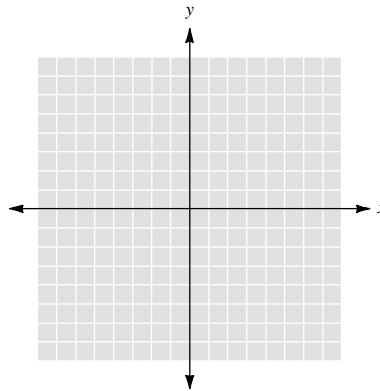
2.  $y > 3$



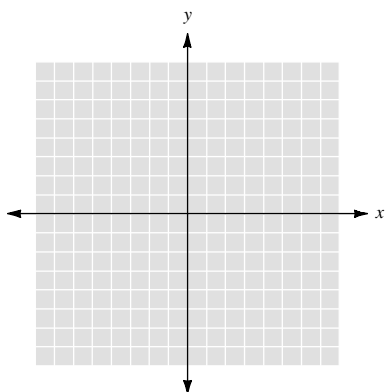
3.  $y < -4$



4.  $x \geq -2$



5.  $x > 3$



6.  $y \leq 2$

