6 CHAPTER REVIEW

6.6 Solve Absolute Value Inequalities

pp. 398–403

EXAMPLE

Solve $3|2x + 11| + 2 \leq 17$. Graph your solution.

$3|2x + 11| + 2 \leq 17$ **Write original inequality.**

$3|2x + 11| \leq 15$ **Subtract 2 from each side.**

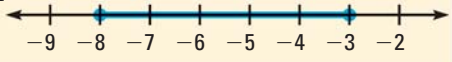
$|2x + 11| \leq 5$ **Divide each side by 3.**

$-5 \leq 2x + 11 \leq 5$ **Rewrite as compound inequality.**

$-16 \leq 2x \leq -6$ **Subtract 11 from each expression.**

$-8 \leq x \leq -3$ **Divide each side by 2.**

▸ The solutions are all real numbers greater than or equal to -8 *and* less than or equal to -3.



EXERCISES

EXAMPLES 1, 2, and 3 on pp. 398–399 for Exs. 31–36

Solve the inequality. Graph your solution.

31. $|m| \geq 8$ **32.** $|6k + 1| \geq 2$ **33.** $|3g - 2| < 5$

34. $6|3x + 5| \leq 14$ **35.** $|2j - 9| - 2 > 10$ **36.** $5|d + 8| - 7 > 13$

6.7 Graph Linear Inequalities in Two Variables

pp. 405–412

EXAMPLE

Graph the inequality $y < 3x - 1$.

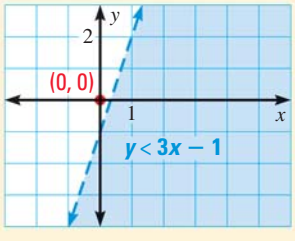
STEP 1 **Graph** the equation $y = 3x - 1$. The inequality is $<$, so use a dashed line.

STEP 2 **Test** $(0, 0)$ in $y < 3x - 1$.

$0 \stackrel{?}{<} 3(0) - 1$

$0 < -1$ ✗

STEP 3 **Shade** the half-plane that does not contain $(0, 0)$, because $(0, 0)$ is *not* a solution of the inequality.



EXERCISES

EXAMPLES 1, 2, 3, 4, and 5 on pp. 405–407 for Exs. 37–44

Tell whether the ordered pair is a solution of $-3x + 2y \geq 16$.

37. $(-2, 8)$ **38.** $(-1, -1)$ **39.** $(-2, 10)$ **40.** $(9, -5)$

Graph the inequality.

41. $y > 2x + 3$ **42.** $y \leq \frac{1}{2}x - 1$ **43.** $3x - 2y < 12$ **44.** $y \geq 3$