

Section 8.5: Systems of Inequalities**Key Topics:** graphing a linear inequality, graphing systems of inequalities**Graphing a Linear Inequality in Two Variables****OBJECTIVE***Graph an inequality in two variables.*

List the four steps of graphing an inequality in two variables.

Step 1 _____**Step 2** _____
_____**Step 3** _____
_____**Step 4** _____
_____Graph the inequality $2x - 3y > 12$.Graph the solution set of the system of inequalities $\begin{cases} 3x + 5y \geq 15 \\ 2y - x \leq 4 \end{cases}$.

To graph a nonlinear inequality, we follow the _____ steps that we used in solving a _____ inequality.

The procedure for solving a _____ system of inequalities is _____ to the procedure for solving a linear _____.

Graph the solution set of the system of inequalities.

$$\begin{cases} y < x + 4 \\ y \geq x^2 + 2 \end{cases}$$