HW 14: Graphing Inequalities Worksheet

Sketch the graph of the linear inequalities

1. $y \geq -3x + 4$
2. $y < -4$
3. $y > 2x - 5$
4. $y \geq \frac{7}{4}x + 2$

Sketch the solution to each system of inequalities

5. $\begin{cases} y > 4x - 3 \\ y \geq -2x + 3 \end{cases}$
6. $\begin{cases} y \geq -5x + 3 \\ y > -2 \end{cases}$
7. $\begin{cases} x \leq -3 \\ 5x + 3y \geq -9 \end{cases}$
8. $\begin{cases} 4x - 3y < 9 \\ x + 3y \geq 6 \end{cases}$
9. $\begin{cases} x + y > 2 \\ 2x - y > 1 \end{cases}$
10. $\begin{cases} y \geq x - 3 \\ y \leq -x - 1 \end{cases}$

11. State one solution to $\begin{cases} y < 2x - 1 \\ y \geq 10 - x \end{cases}$

12. Write a system of inequalities whose solution is the set of all points in quadrant I not including the axes.

Use your calculator to solve the following:

13. $x^2 - 3x - 7 > 0$
14. $3|x + 5| - 2 = -(x + 4)^2 + 2$
15. $2x^2 + 5x - 9 \leq 0$

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