

SYSTEM OF LINEAR INEQUALITIES Assignment

Solve the following inequalities and graph its solution

1.
$$\begin{cases} x + y \geq 0 \\ 2x - y \geq 0 \end{cases}$$

2.
$$\begin{cases} 3x + y \geq 0 \\ 2x + y \geq 0 \\ x \leq 2 \end{cases}$$

3.
$$\begin{cases} x + y - 3 \leq 0 \\ 2x - y - 1 \leq 0 \end{cases}$$

4.
$$\begin{cases} x + y \geq -1 \\ x + y \leq 2 \end{cases}$$

5.
$$\begin{cases} x + y \leq 4 \\ 3x + y \leq 6 \end{cases}$$

6.
$$\begin{cases} y \geq 2x + 1 \\ y \geq -x + 3 \end{cases}$$

Solve the following word problem:

7. Jessica works as an online tutor for \$6 per hour. She also works as an editor for \$3. She is allowed to work 30 hours per week and she wants to make at most \$60. Write and graph a system of linear inequalities.
8. Fuel from PDV pump A costs \$4 per gallon and from PDV pump B costs \$2 per gallon. Marc has at most \$24 to spend on fuel. Write and graph a system of linear inequalities.