

Lesson #3 A-2: Understanding and Solving Systems of Inequalities with Two or Three Inequalities
(Reference: Lesson #43 in book)**Problem**

1. For each of the following systems of Inequalities, please determine whether the given point is a solution to the system of Inequalities or not. (SHOW ALL OF YOUR WORK.)

1. (3,6)

$$2x - 5y \leq -10$$

$$x + 3y > 18$$

2. (2,3)

$$-4x - 3y < -15$$

$$5x - 3y \geq 5$$

3. (-4,-2)

$$3x - 7y \geq 2$$

$$-3x + 2y > 7$$

4. For each of the following systems of inequalities with two inequalities, please solve the system by graphing method and expression the solution by shading the solution region. (SHOW ALL OF YOUR WORK.)

4. $2x + 3y < 6$

$$-x + y < 5$$

5. $2x + 8y \leq 16$

$$-2x + y \geq -4$$

6. $4x + 5y \geq 20$

$$2x - 4y \leq 12$$

7. $16x + 4y < 8$

$$-6x + 2y > 8$$

8. For each of the following systems of inequalities with three inequalities, please solve the system by graphing method and expression the solution by shading the solution region. (SHOW ALL OF YOUR WORK.)

8. $2x + 3y > 6$

$-x + y < 5$

$x \leq 3$

9. $-6x + 2y \leq -4$

$-3x - 9y > -27$

$-3x + 4y \geq -20$

10. $-3x + 6y \leq -18$

$-4x + 8y > 32$

$5x - 10y \leq -10$