

Systems of Linear Inequalities

Algorithm

1. Graph each boundary line (solid or dashed)
2. Shade in the appropriate side of each inequality by picking a convenient point for each inequality on each side of the line
3. Where the shading intersects (overlaps) is the solution

Find the solution set for each system of equations

1. $x + y > 5$
 $y > 2x - 1$

2. $y \leq 2x + 3$
 $y > -3x$

3. $y < 4x - 3$
 $y > -x - 3$

4. $2x + 3y \leq 6$
 $y \leq x + 2$

5. $3x - 4y = 12$
 $y = 2x - 3$

6. $5x + 2y > -10$
 $2x - 5y > 10$

7. $y \leq x$
 $y > -x$

8. $y < -2x$
 $3x - y \leq 6$

9. $x - 2 \leq y \leq 3$

10. $-x + 2 < y \leq 2x + 1$