3-2 Skills Practice

Solving Systems of Inequalities by Graphing

Solve each system of inequalities by graphing.

1. \(x < 1\)
   \(y \geq -1\)

2. \(x \geq -3\)
   \(y \geq -3\)

3. \(x \leq 2\)
   \(x > 4\) no solution

4. \(y \geq x\)
   \(y \geq -x\)

5. \(y < -4x\)
   \(y \geq 3x - 2\)

6. \(x - y \geq -1\)
   \(3x - y \leq 4\)

7. \(y < 3\)
   \(x + 2y < 12\)

8. \(y < -2x + 3\)
   \(y \leq x - 2\)

9. \(x - y \leq 4\)
   \(2x + y < 4\)

Find the coordinates of the vertices of the triangle formed by each system of inequalities.

10. \(y \leq 0\)
    \(x \leq 0\)
    \(y \geq -x - 1\)
    \((0, 0), (0, -1), (-1, 0)\)

11. \(y \leq 3 - x\)
    \(y \geq 3\)
    \(x \geq -5\)
    \((0, 3), (-5, 3), (-5, 8)\)

12. \(x \geq -2\)
    \(y \geq x - 2\)
    \(x + y \leq 2\)
    \((-2, 4), (-2, -4), (2, 0)\)