

Worksheet: Graphing Linear Inequalities in Two Variables

- For which inequality is $(0, -2)$ a solution?
A. $y - 0.5x \geq 5$ **B.** $y \leq 3 - 2x$ **C.** $y < -x - 3$ **D.** $y > -1$
- Consider the graph of the inequality $x - 2y < 7$.
Determine whether each point is in its solution region.
a) $(-1, 0)$ **b)** $(2, 4)$ **c)** $(-3, -10)$
- Determine the following for each linear inequality:
i) the equation of the boundary line
ii) whether the boundary line is solid or dashed
iii) if $(0, 0)$ is a solution
iv) whether the half plane is shaded above or below the boundary line
a) $y - x \geq 10$ **b)** $y < x + 3$ **c)** $y > -3$
- Graph each inequality in # 3.
- Graph each inequality.
a) $\{(x, y) \mid x - y + 1 \leq 2, x \in \mathbb{W}, y \in \mathbb{W}\}$ **b)** $\{(x, y) \mid -3x + 1 > 4, x \in \mathbb{I}, y \in \mathbb{I}\}$

ANSWERS:

- B**
- a)** solution **b)** solution **c)** not a solution
- a)** **i)** $y - x = 10$ **ii)** solid **iii)** $(0, 0)$ is not a solution.
iv) above
b) **i)** $y = x + 3$ **ii)** dashed **iii)** $(0, 0)$ is a solution.
iv) below
c) **i)** $y = -3$ **ii)** dashed **iii)** $(0, 0)$ is a solution. **iv)** above

