

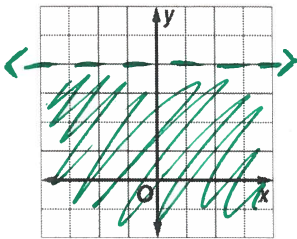
5-6 Graphing Inequalities in Two Variables

Graph Linear Inequalities The solution set of an inequality that involves two variables is graphed by graphing a related linear equation that forms a boundary of a **half-plane**. The graph of the ordered pairs that make up the solution set of the inequality fill a region of the coordinate plane on one side of the half-plane.

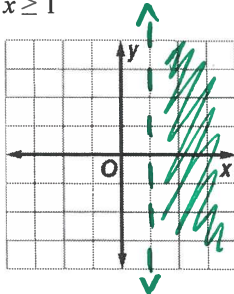
The boundary line is solid for \geq, \leq
 The boundary line is dashed for $>, <$

Graph each inequality use DESMOS to help.

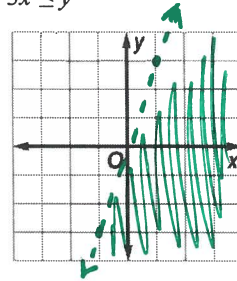
1. $y < 4$



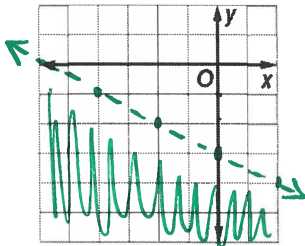
2. $x \geq 1$



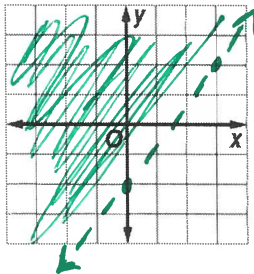
3. $3x \leq y$



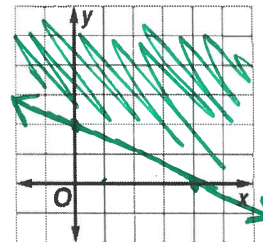
4. $y < -\frac{1}{2}x - 3$



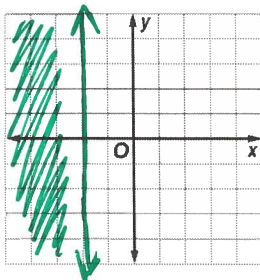
5. $4x - 3y < 6$



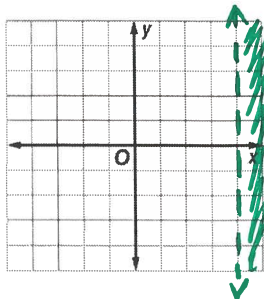
6. $3x + 6y \geq 12$



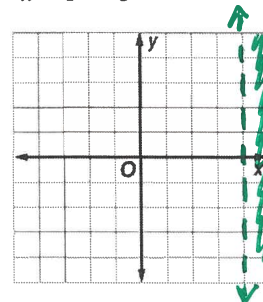
7. $x + 7 \leq 5$



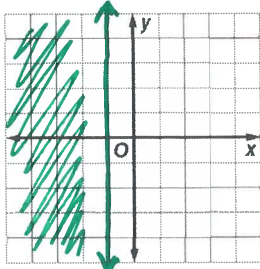
8. $x - 2 > 2$



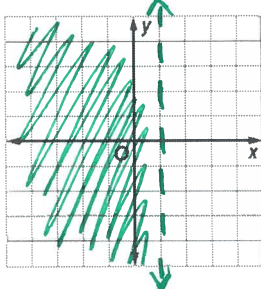
9. $-x + 1 < -3$



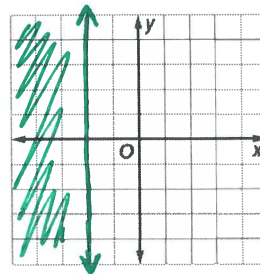
10. $-x - 7 \geq -6$



11. $3x - 20 < -17$



12. $-2x + 11 \geq 15$



Match each inequality to the graph of its solution.

1. $y - 2x < 2$ - B

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

3. $2y - x \geq 4$ - A

4. $x + y > 1$ - C

