

6-6

Study Guide and Intervention

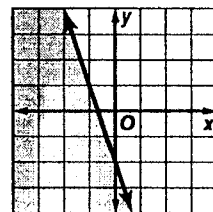
Graphing Inequalities in Two Variables

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.

Example

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

- STEP 1** Get y by itself (if NOT Already)
- STEP 2** GRAPH the line, ----- for $<, >$
————— for $\leq, \geq$
- STEP 3** Shade the correct side of the line.

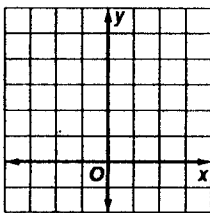


CK ANY (x, y) in SHADE IS TRUE, UNSHADED IS FALSE

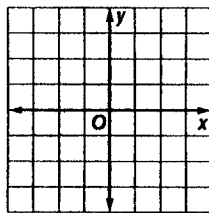
Exercises

Graph each inequality.

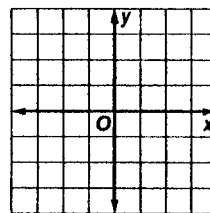
1. $y < 4$



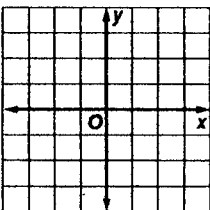
2. $x \geq 1$



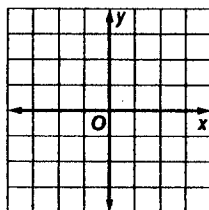
3. $3x \leq y$



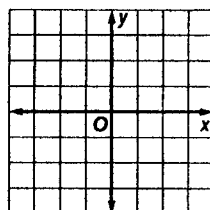
4. $-x > y$



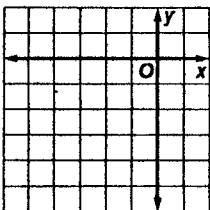
5. $x - y \geq 1$



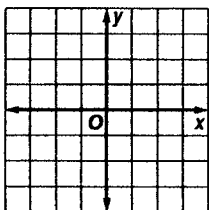
6. $2x - 3y \leq 6$



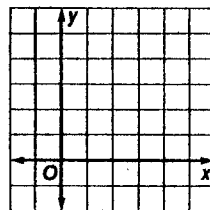
7. $y < -\frac{1}{2}x - 3$



8. $4x - 3y < 6$



9. $3x + 6y \geq 12$



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ON
LOOSE
LEAF

GRAPHS
ON
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OR
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