

HOy - horizontal 0-slope - touches y-axis

9/12/16

VUX - vertical undefined slope
 $x = \#$

Graphing Linear Inequalities

less than $<$, greater than $>$, less than or equal to \leq , greater than or equal to \geq
 not an = sign \hookrightarrow less than or equal to

1. put in slope intercept form $\rightarrow y = mx + b$
 2. graph line using slope + y-intercept
 3. Solid line or dashed line
 4. SHADE
- *** HOy VUX ***

SOLID LINE
 $=, \leq, \geq$

Example: Graph $2x - 3y < 12$

$$\frac{-3y < 2x + 12}{-3} \quad \frac{-2x}{-2x}$$

$y > \frac{2}{3}x - 4$

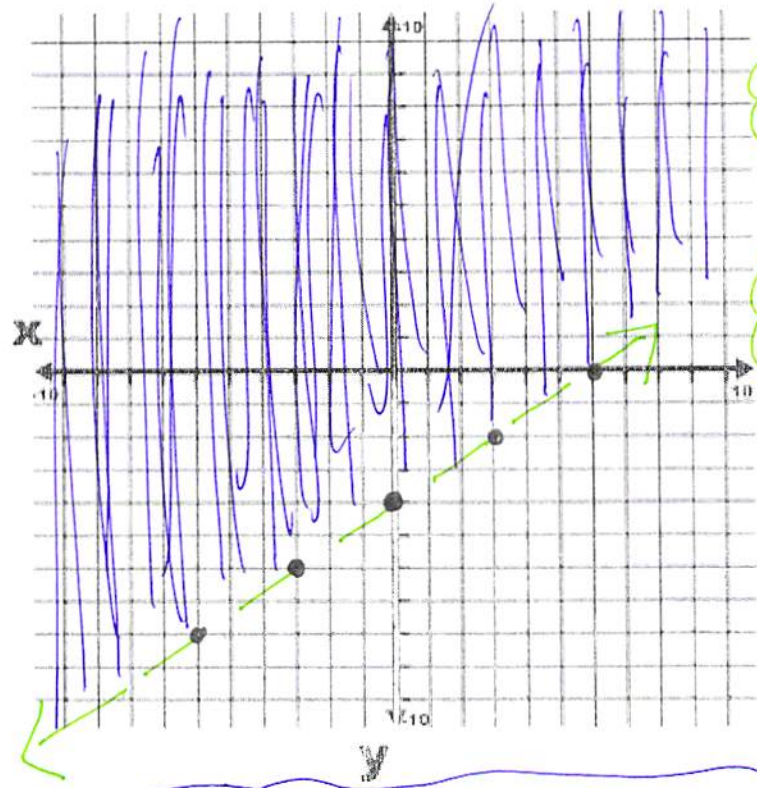
* When you divide by a negative, you flip the sign *

DASHED LINE
 $<, >$

SHADE ABOVE
 bigger y-values
 $>, \geq$

$<, \leq$

SHADE BELOW



$m = \frac{2}{3}$

$b = -4$

(smaller y-values)

Where do you shade?
 y is greater than so shade above

What does the shaded portion mean? any point in the shaded region is a solution - makes it true

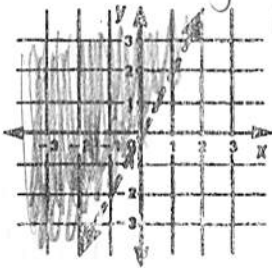
Graphing Linear Inequalities Practice Worksheet A

Name _____ Class Period _____

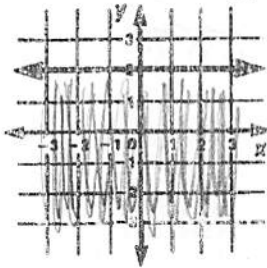
Graphing Inequalities in Two Variables

Determine which half-plane is the graph of each inequality.

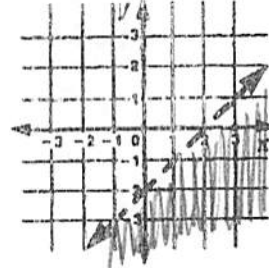
1. $y > 2x$ *y is greater than*



2. $y \leq 2$ *y is less than or equal to*

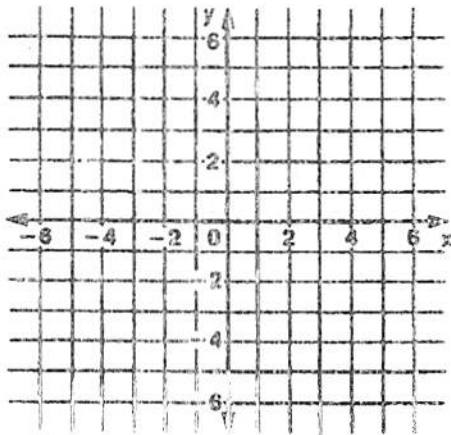


3. $y - x < -2$ *y < x - 2*
y is less than

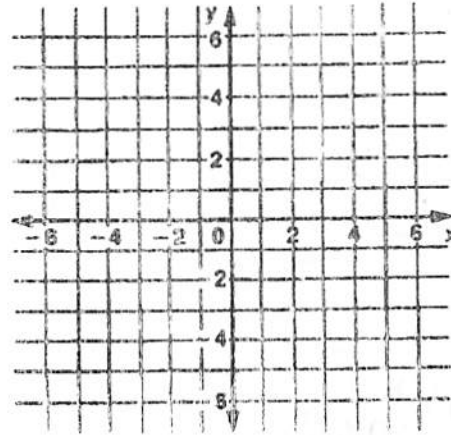


Graph each inequality.

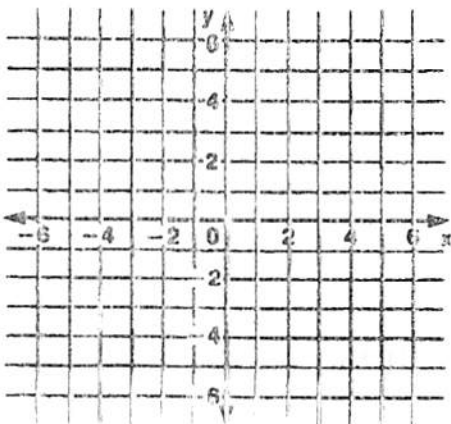
4. $y - x \leq 4$



5. $2x + y > 5$



6. $x + 2y < -6$



7. $2x - y \leq 4$

