Day 28

3.3 Systems of Linear Inequalities

$< >$ dashed $\leq \geq$ solid

$<$ or $\leq$ less than: shade below the line or LEFT (vertical lines)

graphing calc

$>$ or $\geq$ Greater than: Shade ABOVE or to RIGHT (vertical)

ex Tell whether $(-2, 2)$ is a solution to the system.

* Hint: use TEST feature on graphing calc.

2nd | MATH

1. $x - 2y < 6$
2. $y \leq -\frac{3}{2}x + 5$

(1) $-2 - 2 \cdot 2 < 6$

$-2 - 4 < 6$

$-6 < 6$ ✓ TRUE (1) → YES

(2) $2 \leq -\frac{3}{2}(-2) + 5$ TRUE (1)

EX 2

$$\begin{cases} -x + y > -1 \\ -(-2) + 2 > -1 \\ x + y > 3 \\ -2 + 2 > 3 \end{cases}$$

TRUE

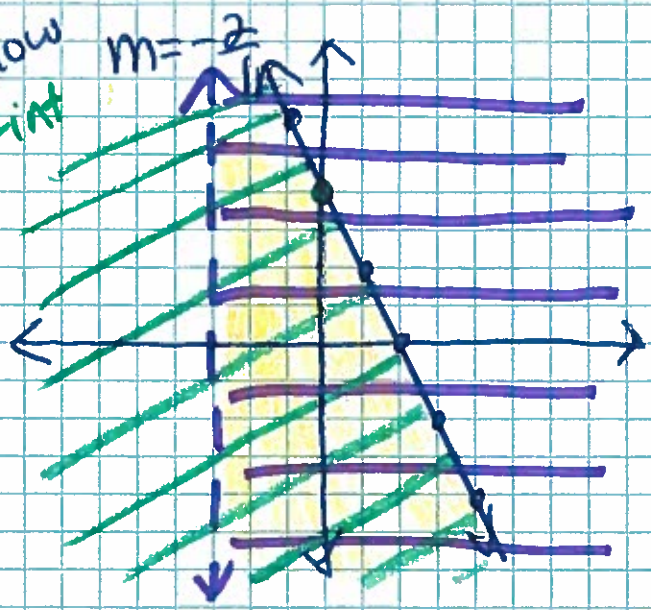
FALSE → NO

GRAPH

ex3 $y \leq \frac{-2}{1}x + 4$ ← y-int; ↙ solid, shade below

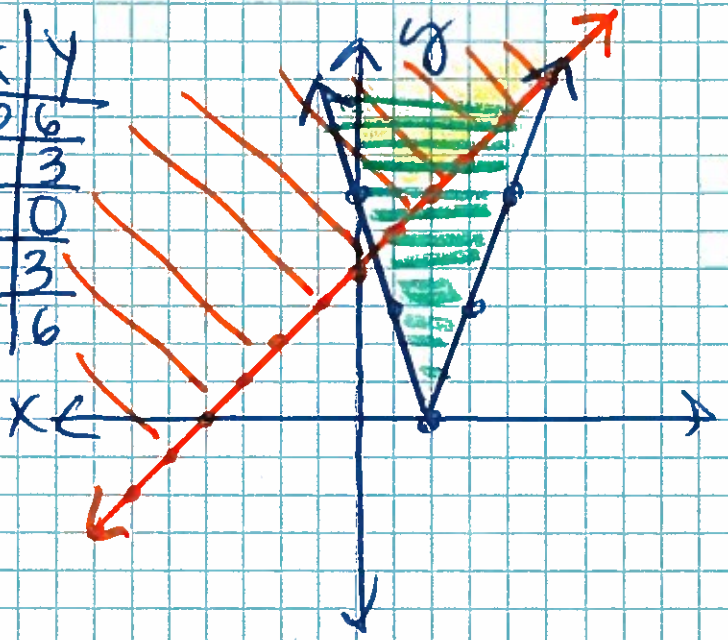
$x > -3$

vertical
shade right
dashed



ex4 $y \geq |3x-6|$ →

x	y
0	6
1	3
+2	0
3	3
4	6



Rewrite

$-x \geq 4 - y$

$-4 \quad -4$

$-y \leq -x - 4$

$\div -1 \quad \div -1 \quad \div -1$

$y \geq 1x + 4$ →

solid, above

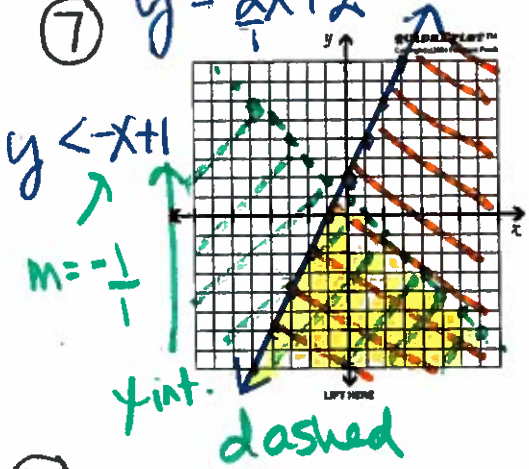
$m = \frac{1}{1}$ $b = 4$ y-int.

Name _____ Date _____ Blck ____

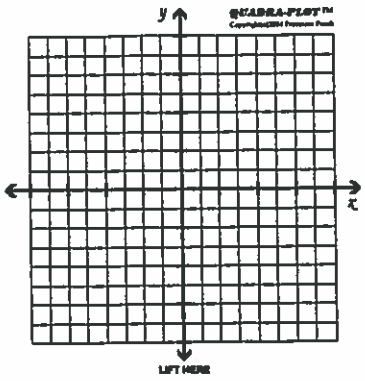
3.3 Systems of Inequalities

Textbook p. 136-137 (4-8, 13, 18, 19, 21, 23, 30-34, 45)

(7) $y \leq 2x+2$



(8)



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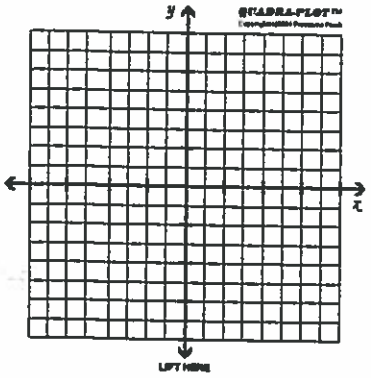

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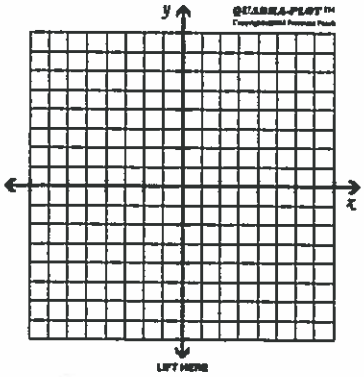

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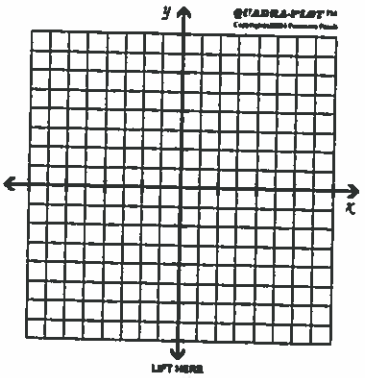

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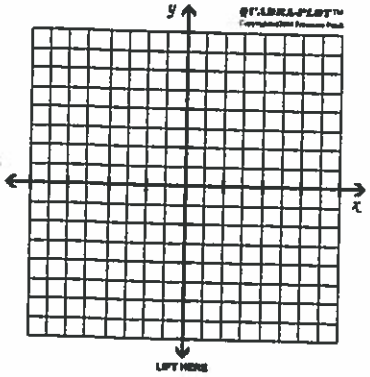

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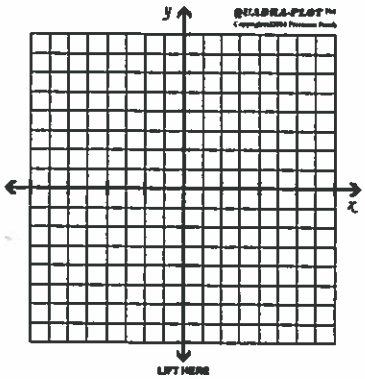

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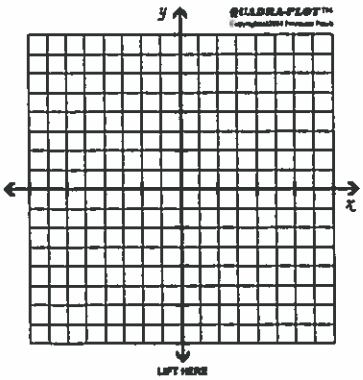

(4) (5) (6)

(30) _____

(31) _____

(32) _____

(33) _____

(34) _____